

The 43rd ASMS Conference on Mass Spectrometry and Allied Topics, Preliminary Program

May 21–26, 1995
Atlanta, Georgia

For additional information, contact ASMS, 1201 Don Diego Avenue, Santa Fe, NM 87505.
Telephone: (505) 989-4517. Fax: (505) 989-1073

8:15 AM	MONDAY ORALS PLENARY LECTURE: Dr. Robert Watson, Office of Science & Technology Policy		
9:05–9:30	Break		
Morning	Recent Developments in the Characterization of Aerosol Microparticles, organized by Mike Ramsey		
MOA 09:30	Ambient Aerosol Analysis Using Aerosol-Time-of-Flight Mass Spectrometry; *Prather, Kimberly; Lloyd, Patrick; Morrical, Bradley; Noble, Christopher; Nordmeyer, Trent; Salt, Kimberly; Fergenson, David; University of California, Riverside.	MOA 04:20	Effects of MALDI and Solution Parameters on Aerosol MALDI Ion Signal; *Beeson, Michelle D.; Wei, Xiaona; Russell, David H.; Laboratory for Biological Mass Spectrometry, Texas A & M University.
MOA 10:10	Rapid Single-Particle Mass Spectrometry of Aerosols and Aerosol Reactions; *Johnston, Murray; Carson, Peter; Mansoori, Bashir; Wexler, Anthony; University of Delaware, Newark, DE.	MOA 04:40	Application of Two-Step Laser Mass Spectrometry to Carogen; *Zhen, Quio; Zenobi, Renato; Knochenmuss, Richard; Buseck, R. Peter; Federal Inst of Technology (EZH), Zurich, Switzerland.
MOA 10:30	Field Measurements of Single Particle Composition; *Murphy, D.M.; Thomson, D.S.; Aeronomy Laboratory, NOAA, Boulder, CO.	MOA 05:00	A Reversed Geometry Organic Ion Microprobe; *Todd, Peter; Short, Robert; Oak Ridge National Laboratory.
10:50	Break		
MOA 11:10	Tandem Mass Spectrometry of Air-borne Particles; Yang, Mo; Whitten, William; *Ramsey, Michael; Oak Ridge National Laboratory, Oak Ridge, TN 37831.	Morning	Computational & Experimental Approaches to Ion Thermochemistry & Structure, organized by Bob Squires
MOA 11:30	Sulfur Speciation of Single Aerosol Particles; *Neubauer, Kenneth; Johnston, Murray; Wexler, Anthony; University of Delaware.	MOB 09:30	A Computational Approach to Gas-Phase Ion Chemistry; *Radom, Leo; Research School of Chemistry, Australian National University.
MOA 11:50	Detection and Characterization of Ultrafine Particles; *Reents, William; AT & T Bell laboratories, Murray Hill.	MOB 10:10	Recent Experimental Investigations of Gaseous Ion Thermochemistry; *McMahon, Terry; University of Waterloo.
	AFTERNOON	MOB 10:30	Structure and Reactivity Of A Cyclopropyl Anion: Experiment and Theory; Baschky, Michael; Peterson, Kent; *Kass, Steven; University of Minnesota, Minneapolis, MN 55455.
MOA 04:00	Laser Microprobe Mass Spectrometry of Soot and Soot Precursor Particles;	10:50	Break
		MOB 11:10	Computational Investigations of Ketene Anion Reactions in the Gas Phase; *Hadad, Christopher; Department of Chemistry, Ohio State University, Columbus OH.
		MOB 11:30	Neutral and ionic heats of formation; measurement and reliability; *Holmes, John L.; Chemistry Department, Univer-

- sity of Ottawa, Ottawa, Ontario, Canada K1N 6N5.
- MOB 11:50 **Organic Radical Cations;** *Kentamaa, Hilikka; Purdue University, West Lafayette.
- MOB 12:10 **4-Member Cyclic Halonium Ions in Intramolecular 1,3-Fluoride Transfer;** *Morton, Thomas Hellman; Dept. of Chemistry, University of California, Riverside.

AFTERNOON

- MOB 04:00 **Theoretical Studies of Proton Transfer Potential Energy Surfaces;** *Gronert, Scott; Kimura, Cliff; Sadoun, Aladin; San Francisco State University.
- MOB 04:20 **Metal-Ligand Thermochemistry by Guided Ion Beam Mass Spectrometry;** *Armentrout, Peter; Chemistry Department, University of Utah, Salt Lake City.
- MOB 04:40 **Experimental and Ab Initio Studies of Second Row Radicals;** *Turecek, Frantisek; Shaffer, Scott; Gu, Ming; Hop, Cornelis; University of Washington, Seattle, WA.
- MOB 05:00 **Chemical, Physical and Theoretical Characterization of Benzyne Anions;** Wenthold, Paul; Nash, John; *Squires, Robert; Purdue University, Department of Chemistry, W. Lafayette, IN.

Morning *Mass Spectrometry of Polymers, organized by Drew Evans*

- MOC 09:30 **Polymer Surface Characterization by Imaging Time-of-Flight SIMS;** Briggs, David.
- MOC 10:10 **Characterisation of synthetic polymer formulations using MALDI;** *Scrivens, Jim; Yates, Hilary; Segal, John; Jackson, Tony; Taylor, Mike; Critchley, Glen; Maisey, Ann; ICI Materials Wilton Cleveland England TS90 8JE.
- MOC 10:30 **Matrix-Assisted Laser Desorption Investigations of Industrial Polymers;** *Hanton, Scott; Parees, David; **Goldschmidt, Robert; King, Richard; Owens, Kevin; Air Products and Chemicals., Allentown, PA 18195; Department of Chemistry, Drexel University, Philadelphia, PA 19104.
- 10:50 **Break**
- MOC 11:10 **High Mass Resolution Imaging TOF-SIMS Analysis of Polymer Surfaces;** *Reichmaier, Stefan; Physical Electronics Inc., 6509 Flying Cloud Drive, Eden Prairie, MN 55344.

- MOC 11:30 **REVERSE ENGINEERING OF INDUSTRIAL POLYMER FORMULATIONS BY MALDIMS;** *Tang, X.; Vertes, Akos; **Dreifuss, Peter; Hull, Clifford; Dutton, Walter; Department. of Chemistry, George Washington Univ., Washington, DC 20052.

- MOC 11:50 **MALDI in Polymer Chem: Rapid Analysis of Chemical Modifications on Polymers;** *Whittall, Randy M.; Li, Liang; Dept. of Chemistry, University of Alberta, Edmonton, AB Canada T6G 2G2.

- MOC 12:10 **MW Determination of Synthetic Polymers from ESI & MALDI Mass Spectra;** *McEwen, Charles; Jackson, Christian; Larsen, Barbara; E. I. du Pont de Nemours & Company.

AFTERNOON

- MOC 04:00 **Mass Spectrometry of Otherwise Fragile Polymers by End Group REMPI;** Anex, Deon S.; Hunziker, Heinrich E.; *de Vries, Mattanjah S.; IBM, Almaden Research Center, San Jose, CA.

- MOC 04:20 **A Polymer Library By In-Source Direct Pyrolysis Mass Spectrometry;** *Qian, Kuangnan; Killinger, William E.; W.R. Grace & Co.-Conn., Research Division.

- MOC 04:40 **Polymer Analysis Using a Radio Frequency Glow Discharge Mass Spectrometer;** *DePalma, Jr., Patrick; Shick, Jr., Charles; Marcus, R. Kenneth; Clemson University.

- MOC 05:00 **FD-MS Studies of Samarium-based Oligomerization of Ethylene;** *Greaves, John; DeCoster, Donna M.; Evans, William J.; UCI - Department of Chemistry, Irvine, CA.

Morning *Electrospray Ionization - Applications, organized by Dan Kassel*

- MOD 09:30 **Protein & Peptide Analysis by A Low-Flow, High Sensitivity MicroES Source;** *Wilm, Matthias; Mann, Matthias; European Molecular Biology Laboratory (EMBL).

- MOD 09:50 **Biochemical Characterization of EGF Receptor-SRC SH2 Interactions;** *Lombardo, Christian; Consler, Thomas; Luther, Michael; Kassel, Daniel; Glaxo Research Institute, Research Triangle Park, NC, 27709.

- MOD 10:10 **RECEPTOR PEPTOID LIGANDS IN COMBINATORIAL MIXTURES: AFFINITY SELECTION ESMS;** *Kaur, Surinder; Huebner, Vreni; Dollinger,

	Gavin; Tang, Dazhi; McGuire, Lisa; Chiron Corporation, 4560 Horton St., Emeryville, CA 94608-2916.	C.; Pacific Northwest Laboratory, Richland, WA 99352.
MOD 10:30	Proteins Associated with Cardiomyocyte Hypertrophy: 2D PAGE, LCMS AND MS / MS; *Arnott, David; King, Kathy; Bier, Mark; Land, Adrian; Stults, John; Genentech, Inc., South San Francisco, CA 94080.	MS TUTORIAL - afternoon only
10:50	Break	EI and CI with Quadrupole Mass Analyzers; Allison, John; Michigan State University.
MOD 11:10	Amino Acid Transformations during Oxidation of Peptides and Proteins; *Chowdhury, Swapan; Eshraghi, Jamshid; Wolfe, Henry; Forde, Diane; Hlavac, Allan; Johnston, David; Sanofi Winthrop, Inc., 9 Great Valley Parkway, Malvern, PA 19355.	Basics of FAB-MS on a Magnetic Sector Mass Spectrometer; Musselman, Brian; JEOL.
MOD 11:30	Characterization of Post-translational Modifications to Histones by ESI-MS; *Weir Lipton, Mary S.; Springer, David L.; Edmonds, Charles G.; Pacific Northwest Laboratory.	Morning Elemental and Isotopic Analysis, organized by Sam Houk
MOD 11:50	MALDI and ESI MS of Covalent Peptide-Oligonucleotide Hybrids; *Jensen, Ole N.; Kulkarni, Sandhya; Aldrich, Jane V.; Bennett, Samuel E.; Mosbaugh, Dale W.; Barofsky, Douglas F.; Dept. Biochem. Biophys., Oregon State Univ., Corvallis, OR.	MOF 09:30 Direct Connection of an ICP and an Ion Trap MS; Barrinaga, Charles J., Eiden, Gregory C., Koppelaar, David W.; Pacific NW Laboratories USDOE), Richland, WA.
MOD 12:10	Studying Noncovalent Protein-Peptide Interactions by ESI Mass Spectrometry; *Loo, Joseph A.; Hu, Peifeng; Thanabal, Venkataraman; Parke-Davis Pharm. Res., Div. Warner-Lambert Co., Ann Arbor, MI 48105.	MOF 09:50 Glow Discharge Ion Trap Mass Spectrometry Employing Filtered Noise Fields; *Duckworth, Douglas C.; Smith, David H.; Goeringer, Douglas E.; McLuckey, Scott A; Oak Ridge National Laboratory, Oak Ridge, TN 37831-6375.
	AFTERNOON	MOF 10:10 TIME-OF-FLIGHT MASS SPECTROMETRY WITH A PULSED GLOW DISCHARGE ION SOURCE; King, Fred; *Steiner, Robert; Department of Chemistry, West Virginia University, Morgantown, WV.
MOD 04:00	Mass Spectrometry in the Development of Recombinant Protein Drugs; Kubis, Alan; Chen, Tom; Ghosh, Kris; Natale, David; Nigam, Somesh; *Labdon, James; Regeneron Pharmaceuticals Inc., Tarrytown.	MOF 10:30 Anodic Stripping Voltammetry Coupled On-line with ICP-MS; *Van Berkel, Gary; Zhou, Feimeng; Duckworth, Douglas; Morton, Shelby; Oak Ridge National Laboratory.
MOD 04:20	Application of Micro-ES / MS / MS for Monitoring the Effects of Drugs of Abuse; *Emmett, Mark R.; Caprioli, Richard M.; University of Texas Medical School, Houston, TX.	10:50 Break
MOD 04:40	Sequencing Nucleotides (n ≥ 50) by Tandem Mass Spectrometry; *Little, Daniel P.; McLafferty, Fred W.; Cornell University, Ithaca, NY.	MOF 11:10 Laser Ablation ICP / MS Analysis of Real World Samples; *Kahr, Michael; Brink, Christopher; Figg, Deborah; Los Alamos National Laboratory, Los Alamos NM.
MOD 05:00	Searching Chemical Diversity for Molecular Recognition by ESI-MS; *Smith, Richard D.; Bruce, James E.; Chen, Ruidan; Cheng, Xueheng; Schwartz, Brenda L.; Anderson, Gordon A.; Hofstadler, Steven A.; Gale, David	MOF 11:30 Direct Analysis of Co-Cr-Fe-Tb Thin Film Samples by Laser Ablation ICP-MS; *Ling, Yong-Chien; Shieh, Fang-Jir; Department of Chemistry, National Tsing Hua University, Hsinchu.
		MOF 11:50 Analysis of Nominally Flat Samples by Radio Frequency Powered GDMS; *Shick, Jr., Charles R.; Marcus, R. Kenneth; Clemson University.
		MOF 12:10 Modifying the Shape of the Analyte Zone in an ICP w / Graphite Torch Injector; *Houk, R.S.; Clemons, P.S.; Praphairaksit, Narong; Ames Laboratory USDOE, Ames.

AFTERNOON

- MOF 04:00 **High Precision Continuous Flow D / H Measurement from Hydrogen Gas and Water;** *Tobias, Herbert J.; Goodman, Keith J.; Blacken, Craig E.; Brenna, J. Thomas; Cornell University.
- MOF 04:20 **A Field Mass Spectrometric System for Isotopic Analysis of Actinides;** *Kahr, Michael; Olivares, Jose; Abney, Kent; Kinkead, Scott; Los Alamos National Laboratory, Los Alamos NM.
- MOF 04:40 **Nuclear Isotope Measurement in the Hanford Environment;** *Stoffel(s), J. J.; Kelley, J. M.; Bond, L. A.; Kiddy, R. A.; Brauer, F. P.; Pacific Northwest Laboratory, Richland, WA 99352.
- MOF 05:00 **High-sensitivity Thermal Ionization Cavity Source for Mass Spectrometry;** *Olivares, Jose A.; Chamberlin, Edwin P.; Duan, Yixiang; Los Alamos National Laboratory, CST-9, MS J514, Los Alamos, NM 87545.

MONDAY POSTERS

Ion Molecule Reactions

- MPA 001 **Thermochemical Studies of Halocarbenes and Halosilylenes;** *Poutsma, John; Paulino, Jose; Squires, Robert; Purdue University, Department of Chemistry.
- MPA 002 **Calculated and Measured Double-ionization Energies of Carbon Tetrachloride;** *GRANT, RUSSELL. P.; HARRIS, FRANK. M.; **ANDREWS, STUART. R.; PARRY, DAVID. E.; M.S.R.U., U.W. Swansea, Swansea, SA2 8PP, U.K.; Department of Chemistry, U.W. Swansea, Swansea, SA2 8PP, U.K.
- MPA 003 **DETERMINATION OF Se-H BOND ENERGY OF BENZENESELENOL;** Leeck, Diane T.; *Li, Ruomei; Chyall, Leonard; Kenttamaa, Hilkka I.; Purdue University, West Lafayette, IN 47907-1393.
- MPA 004 **Alkali Metal Ion - Crown Ether Bond Strengths by FTICR Threshold CID;** *Pope, Marshall; Dearden, David; Brigham Young University, Provo, Utah.
- MPA 005 **Cation Affinities of Pyridine Bases: Steric Effects;** *Isbell, John; Brodbelt, Jennifer; University of Texas at Austin, Austin, Texas.
- MPA 006 **Charge Repulsion in Peptides and Basicities of Different Charge States;** *Kaltashov, Igor; Fenselau, Catherine; University of Maryland Baltimore County.
- MPA 007 **Polyatomic Cations Affinities of Pyridines Determined by the Kinetic Method;** *Sheng S. Yang;; Guodong Chen;; Philip Wong;; Shuguang Ma;; R. Graham Cooks;; **Fabio C. Gozzo;; Marcos Eberlin;; Department of Chemistry, Purdue University, W. Lafayette, IN 47907; State University of Campinas, Institute of Chemistry, Brazil.
- MPA 008 **Acidities of long chain diols: problems with the kinetic method;** *Higgins, Priscilla; Bartmess, John; Univ of Tennessee, Knoxville.
- MPA 009 **Reactivity and Thermochemistry of Quadricyclane Anion;** *Lee, Hack Sung; Bierbaum, Veronica M.; University of Colorado at Boulder.
- MPA 010 **Temperature dependence of radiative association rates;** *Ryzhov, Victor; Dunbar, Robert C.; Case Western Reserve University.
- MPA 011 **A REACTION WINDOW IN CROSS-SECTIONS FOR DOUBLE ELECTRON CAPTURE REACTIONS;** *Griffiths, William; Langford, Marian; Harris, Frank; University College of Swansea, Swansea.
- MPA 012 **Reactions and Laser Photofragmentation Processes of SiF₂(2 +) and SiF₃(2 +);** **Lee, Yin-Yu; *Leone, Stephen R.; Joint Institute for Laboratory Astrophysics, NIST & CU, Boulder; Department of Chemistry and Biochemistry, University of Colorado at Boulder.
- MPA 013 **Gas-Phase Negative Ion Chemistry of Molecular Fluorine;** Wenthold, Paul; Hu, Jun; *Squires, Robert; Purdue University, Department of Chemistry.
- MPA 014 **Partially Chlorinated Hydrocarbons: Gas-Phase Anion-Molecule Reactions;** *Grabowski, Joseph J.; Braun, Jennifer A.; Department of Chemistry, University of Pittsburgh.
- MPA 015 **Regioselectivity of oxygen addition on PCBs and DDT in ECNCl;** *Lipine, Francois; **Mamer, Orval A.; Milot, Sylvain; Institut Armand-Frappier, Universiti du Quibec, Laval, Canada; Biomedical Mass Spectrometry Unit, Mc Gill University, Montreal, Canada.
- MPA 016 **Dissociative Attachment in Sulfonate and Carboxylate Compounds;** *Andrews, Kim; Bartmess, John; Sorensen, Daniel; Crowder, Cathy; Univ. of Tennessee, Knoxville.
- MPA 017 **Experimental and Theoretical Characterization of the Gas-Phase SO₂N⁻ An-**

- ion; Morgon, Nelson H.; Linnert, Harald V.; *Riveros, Josi M.; Institute of Chemistry, University of Sao Paulo.
- MPA 018 **A NEGATIVE ION STUDY OF THE ISOMERS OF DINITROBENZENE USING A ASGDI SOURCE;** Mo, Wenjun; Langford, Marian, L; Franklin, Anthony, M; *Todd, John, F. J.; The Chemical Laboratory, University of Kent, Canterbury, Kent, CT2 7NH, UK.
- MPA 019 **Investigation of van der Waals clusters by a novel technique for ICR;** *Garbade, Klaus; Wanczek, Karl Peter; Institute of Inorganic and Physical Chemistry, University of Bremen.
- MPA 020 **Consecutive reactions of conjugated dienes;** Rappmund, Andreas; *Wanczek, Karl Peter; Institute of Inorganic and Physical Chemistry, University of Bremen.
- MPA 021 **Bulk Polymerization and Ion Chemistry of Crotonaldehyde, Studied with ICR;** *Harder, Andreas; Spiess, Iris; Wanczek, Karl Peter; Institute of Inorganic and Physical Chemistry, University, D-28334 Bremen.
- MPA 022 **Reactivity of Ionized Carbonyl Compounds and Distonic and Enol Isomers;** *Byrd, Michelle; Castro, Lori; Hwang, Thomas; Smith, Rebecca; Leeck, Diane; Kenttamaa, Hilka; Purdue University, West Lafayette, IN.
- MPA 023 **Generation and Reactivity of Charged Phenyl Radicals;** *Smith, Rebecca; Kenttamaa, Hilka; Purdue University, West Lafayette, IN.
- MPA 024 **CHARGE TRANSFER REACTIONS OF THE CYCLOPROPENYL CATION;** *Watkins, Layle; Rich, Jennifer; Frank, Samantha; Hanson, Curtiss; University of Northern Iowa, Cedar Falls, IA.
- MPA 025 **Selective ion-molecule reactions of benzoyl ions in a quadrupole ion trap;** Creaser, Colin; *Williamson, Brian; **Stockton, Brian; Nottingham Trent University, Nottingham, UK; SmithKline Beecham Pharmaceuticals, Tonbridge, UK.
- MPA 026 **Reactivity of .CH₂PH₃ + and CH₃PH₂ + .;** *Nanayakkara, Vajira; Schweighofer, Andreas; Chou, Phillip; Keck, Helmut; Kenttamaa, Hilka; Purdue University, West Lafayette; Heinrich-Heine University, Dusseldorf.
- MPA 027 **Gas-phase Ion-molecule Reactions of Methyl Tertbutyl Ether (MTBE);** *Peterman, Scott; Rich, Michaela; Hanson, Curtiss; University of Northern Iowa, Cedar Falls, IA.
- MPA 028 **Ion / Molecule Reactions with Polyethylene Glycoles and PEG Ethers;** *Onigbinde, Adebayo; Ridge, D. P.; Munson, Burnaby; Zhang, Tianlan; Dept. of Chem. and Biochem., University of Delaware.
- MPA 029 **GC / CIMS of Lipids with Benzene and Carbon Disulfide;** *Evans, Jason; Nicol, Gordon; Munson, Burnaby; Dept. of Chem. and Biochem. University of Delaware.
- MPA 030 **Gas-Phase Ion-Molecule Reactions of Amines with Carbonyl Compounds;** Pykdldinen, Mika; *Vainiotalo, Pirjo; University of Joensuu, Department of Chemistry, Joensuu, Finland.
- MPA 031 **In-situ Investigation of Soot Formation;** *Egsgaard, Helge; Ris? National Laboratory, DK-4000 Roskilde, Denmark.
- MPA 032 **An Ion Trap MS / MS Study of [C₁₄H₁₀] + , [C₁₀H₁₀] + , and [C₁₀H₈] + Ions.;** *Wang, Xiaomin; **March, Raymond E.; Hopkinson, Alan C.; Bohme, Diethard K.; Dept of Chemistry/Earth & Space Science, York Univ., North York On. Canada; Department of Chemistry, Trent University, Peterborough On., Canada K9J 7B.
- MPA 033 **Isomeric Forms of the Products of Ion-Molecule Association Reactions;** *Kerr, Kelly E.; Adams, Nigel G.; Department of Chemistry, University of Georgia, Athens, Georgia, 30602, USA.
- MPA 034 **Competitive S_Ni / S_N2 from epimeric 1-2 hydroxyether and diether 1-2 indanes.;** Christel, Bourhis; Vincent, Gervat; Marie-Claude, Perlat; Frangoise, Fournier; *Acher, Mandelbaum; **Jean-Claude, Tabet; UPMC (Paris) France; TECHNION, Israel.
- MPA 035 **Ion-Molecule Reactions with Alkyl Cation Transfer by Electrospray FTICR-MS;** *Burton, Richard; Watson, Cliff; Katriitzky, Alan; Eyler, John; University of Florida, Gainesville.
- MPA 036 **Association and Bimolecular Ion-Molecule Reactions of Sulfur Ring Systems;** *James, Mary A.; Gidden, Jennifer; Peschke, Michael; Illies, Andreas J.; Auburn University, Auburn AL.
- MPA 037 **ION / MOLECULE REACTIONS OF ALLYL CHLORIDE IN THE ION TRAP MASS SPECTROMETER;** Mo, Wenjun; Franklin, Anthony, M; *Todd, John. F. J.; The Chemical Laboratory, University of Kent, Canterbury, Kent, CT2 7NH, UK.
- MPA 038 **Mechanism of H / D Exchange in the Reaction of BH₂ + and Deuterium;**

- *Hankin, Joseph; Davico, Gustavo; DePuy, Charles; Damrauer, Robert; Department of Chem. and Biochem., Univ. of Colorado, Boulder CO 80309-0215.
- MPA 039 **Deuterium Exchange in the Systems of $H_2O + / H_2O$ and $H_3O + / H_2O$;** *Anicich, Vincent; Sen, Atish; Jet Propulsion Laboratory/Cal Tech, Pasadena, CA.
- MPA 040 **Isotope Effects in the Dissociation of Aniline and Protonated Aniline;** *Ranasinghe, Yasmin A.; Glish, Gary L.; Department of Chemistry, University of North Carolina at Chapel Hill.
- MPA 041 **Hydrogen / Deuterium Exchange of Multiply-Protonated Cytochrome c Ions;** *Wood, Troy D.; Guan, Ziqiang; Chorush, Russell A.; McLafferty, Fred W.; Cornell University, Ithaca, NY.
- MPA 042 **Resolution of Electrospray Ions in a Time of Flight Mass Spectrometer;** *Lasater, M. A.; Laude, D. A.; University of Texas at Austin.
- MPA 043 **Influence of Water and Structure on Coulomb Energy in Multiply Charged Ions;** *Gross, Deborah S.; Rodriguez-Cruz, Sandra E.; Williams, Evan R.; University of California, Berkeley CA 94720.
- MPA 044 **Acid / Base effect on FAB ionization process;** * L. Amado, Francisco; N. Domingues, Pedro; O. Marques, M. Graa; Ferrer Correia, A. J.; Department of Chemistry, Mass Spec. Lab., University of Aveiro, Portugal.
- MPA 045 **Ion / Molecule Reactions for Improved Effective Mass Resolution in ES / MS;** *McLuckey, Scott; *Goeringer, Douglas; Oak Ridge National Laboratory, Oak Ridge, TN, USA.
- MPA 046 **Structure Elucidation of Peptides by Two-Dimensional FT-ICR MS;** **Solouki, Touradj; *Ross III, Charles; Pasa-Tolic, Ljiljana; Marshall, Alan G.; National High Magnetic Field Laboratory, Florida State U., Tallahassee, FL.
- MPA 047 **FT-ICR Observation of Metabolic Intermediates for Nephrotoxic Chloroalkenes;** *Zhang, Tian-lan; Wang, Liping; Hahsmi, Mazzaz; Anders, M. W.; Thorpe, Colin; Ridge, Douglas; University of Delaware, Newark, DE; University of Rochester, Rochester, NY.
- MPA 048 **Study of Ion-Molecule Chiral Recognition by Amine Exchange Equilibria;** Dejsupa, Chadin; Liang, Yongjiang; *Dearden, David; Brigham Young University, Provo, Utah.
- MPA 049 **Chiral Recognition in Molecular Host-Guest Complexations using FABMS;**

*Sawada, Masami; Takai, Yoshio; Yamada, Hitoshi; Hirayama, Shigeki; Kamada, Kimiko; Hirose, Keiji; Tobe, Yoshito; **Naemura, Koichiro; The Institute of Scientific and Industrial Research, Osaka University; Department of Chemistry, Faculty of Engineering Science, Osaka University.

- MPA 050 **ICR Study of Chirality Influence on Dimer Formation-Decomposition Kinetics;** *Nikolaev, Eugene N.; **Denisov, Eduard V.; Institute of Energy Problems of Chemical Physics RAS, Moscow 117829, Russia; Institute of Energy Problems of Chemical Physics RAS, Moscow 117829, Russ.

- MPA 051 **Study of Chirality Effects on Ion-Molecule Association in Tartrate Esters;** **Nikolaev, Eugene; *McMahon, Terry; University of Waterloo, Waterloo, Ontario, CANADA; Russian Academy of Sciences, Moscow, RUSSIA.

Ion Sources & Mass Spectrometer Design

- MPB 052 **SFC / MS using a glow discharge ionization source;** *Carazzato, Daniel; Bolanger, Patrick; Carrier, Alain; Bertrand, Michel J.; University of Montreal, Montreal, Canada.
- MPB 053 **A NOVEL LOW-POWER RF GLOW DISCHARGE ION SOURCE;** *Langford, Marian L.; Povey, William T.; Todd, John F. J.; Chemical Laboratory, University of Kent, Canterbury, Kent, CT2 7NH, UK.
- MPB 054 **THE COUPLING OF A PENNING ION SOURCE TO AN ION TRAP MASS SPECTROMETER;** *Cairns, Stuart N.; Langford, Marian L.; Todd, John F.J.; The Chemical Laboratory, University of Kent, Canterbury, Kent CT2 7NH, UK.
- MPB 055 **ATMOSPHERIC PRESSURE CHEMICAL IONIZATION BY CORONA DISCHARGE;** *Andrien, Jr., Bruce; Dresch, Tomas; Haren, Patrick; Whitehouse, Craig; Analytica of Branford, Inc., Branford, CT.
- MPB 056 **A New Atmospheric Pressure MIP Ionization Source for Mass Spectrometry;** *Moini, Mehdi; Xia, Ming; Hofmann, Bernhard; Mathews, Kimberly; Holbert, Anthony; Department of Chemistry and Biochemistry, University of Texas, Austin.
- MPB 057 **MULTI-VACUUM STAGE HEXAPOLE ION GUIDE FOR ESI / MS INTERFACE;** *Gulcicek, Erol E.; Whitehouse,

- Craig M.; Analytica of Branford, Inc., Branford, CT.
- MPB 058 **Minimizing Ion Mortality on the Journey from High Pressure to Vacuum;** *Cao, Jian-Ru; Rosell, Joan; Fenn, John B.; Virginia Commonwealth University.
- MPB 059 **A New Electrospray Ion Source for Magnetic Sector Mass Spectrometers;** *Shen, Shida; Whitehouse, Craig M.; Gulcicek, Erol; **Musselman, Brian D.; Finch, Jeff; Analytica of Branford Inc., Branford, Connecticut; JEOL USA, Peabody, Massachusetts.
- MPB 060 **Optimization of an Electrospray Ion Source for the Ion Trap;** *Ranasinghe, Yasmin A.; Glish, Gary L.; Department of Chemistry, University of North Carolina, Chapel Hill.
- MPB 061 **Design of a Composite Liquid-Junction / Electrospray Interface for CE / MS;** *Wachs, Timothy; **Sheppard, Robin; Henion, Jack; Cornell University, Ithaca, NY 14850; Cornell University, Ithaca, NY 14850.
- MPB 062 **A Versatile, Stable CE-ESI Source;** *Kirby, Daniel P.; Barnett Institute, Northeastern University, Boston, MA.
- MPB 063 **Real Time UV Detection with On-Line CE-ESI-MS;** *Foret, Frantisek; Muller, Odillo; Goetzinger, Wolfgang; Thorne, Jacqueline; Karger, Barry L.; Vouros, Paul; Kirby, Daniel P.; Barnett Institute, Northeastern University, Boston, MA.
- MPB 064 **Advanced Liquid Ionization Mass Spectrometry for Analysis of a Mixture;** *Inoue, Masayuki; Kaneko, Takeo; Li, Yaming; Tsuchiya, Masahiko; **Niwa, Yoshio; Yokohama National University, Tokiwadai, Hodogaya, Yokohama, 240, Japan; National Institute of Materials and Chemical Research, Tsukuba, 305, Japan.
- MPB 065 **Electric field stimulated evaporation of ions from liquids in polymer films;** Balkan, Alexander A.; Dodonov, Alexander F.; Novikova, Ludmila I.; *Talrose, Victor L.; Yakovlev, Boris S.; Institute of Energy Problems of Chemical Physics.
- MPB 066 **Molecular Weight Enhancement in GC-MS with Supersonic Molecular Beams;** *Dagan, Shai; Amirav, Aviv; Tel Aviv University.
- MPB 067 **Soft Ionization via Electron Impact on Free-Jet Clusters;** *Wang, Dingneng; Evans, Robert; National Renewable Energy Laboratory, Golden, Colorado.
- MPB 068 **Concentration Enrichment in High Pressure Ion Sources, Part II;** Williamson, D.H.; *Knighton, W.B.; Grimsrud, E.P.; Department of Chemistry, Montana State University, Bozeman, MT 59717.
- MPB 069 **A Portable Mass Spectrometer to Measure Surface Contamination;** *Gregg, Hugh; Meltzer, Michael; Lindsey, Jean; Edberg, Heather; Lawrence Livermore National Laboratory, Livermore CA.
- MPB 070 **Conversion of HP-5985 GC / MS to Automated, High-Volume ES-MS;** *Kiesel, Jennifer R.; Jackson, Alan K.; Depperman, Kevin L.; Hileman, Fred D.; Duffin, Kevin L.; Monsanto Corporate Research, Monsanto Co., St. Louis, MO 63198.
- MPB 071 **Improving Sensitivity in the HP MSD Mass Spectrometers;** *Manura, John; Overton, Santford; Baker, Chris; Scientific Instrument Services, Inc.
- MPB 072 **Modification of an HP 5972 MSD to Accept a Direct Insertion Membrane Probe;** *Bauer, Scott; MIMS Technology Incorporated.
- MPB 073 **Quartz Tip 1000 C Direct Insertion Probe for VG70 series Mass Spectrometers;** *Gallegos, Emilio J.; Bott, John D.; Bott, Geoffrey; GB Scientific, Inc.
- MPB 074 **TWO QUADRUPOLE MASS SPECTROMETERS MODIFIED FOR PYROLYSIS- MS;** *Wilkes, Jon G.; **Voorhees, Kent J.; Lay, Jackson O.; Volmer, Dietrich A.; USFDA, National Center for Toxicological Research, Jefferson, AR 72079; Colorado School of Mines, Golden, CO 80401-1887.
- MPB 075 **EXAMINATION OF SEVERAL SHEET MATERIALS FOR USE AS MEMBRANES IN MI / MS;** *Maden, Amy J.; Hayward, Mark J.; American Cyanamid - Agricultural Research, Princeton, NJ.
- MPB 077 **Modulated Sample, Membrane Inlet MS: Theory and Practice;** *Liu, Fei; Davenport, Michael; Enke, Christie G.; Dept. of Chemistry, The University of New Mexico, Albuquerque, NM 87131.
- MPB 078 **Ion storage study for a segmented-ring ion trap source for TOF-MS;** *Ji, Qinchung; Davenport, Michael R.; Holland, John F.; Enke, Christie G.; Department of Chemistry, Michigan State University; Department of Chemistry, University of New Mexico.
- MPB 079 **A new design of Ion Storage Accelerator for Time-of-Flight MS;** Kraft, Andreas; *Wollnik, Hermann; Laiko, Victor; **Dodonov, Alexander; II. Physikalisches Institut, Universitaet Giessen; Institute of Energy Problems of Chemical Physics, Chernogolovka, Russia.

- MPB 080 **A new MALDI Tandem QUISTOR Time-of-Flight Mass Spectrometer;** *Stoeckli, Markus; Kofel, Peter; Krause, Joern; Schlunegger, Urs P.; Department of Organic Chemistry, Berne, Switzerland.
- MPB 081 **A New LC Electrospray Ion Trap Time-of-Flight Mass Spectrometer;** *Mordehai, Alex; Karnicky, Joseph F.; Limbek, Bela; Buttrill, Jr., S. E.; Varian Associates' Ginzton Research Center, Palo Alto, CA.
- MPB 082 **MALDI TOF / TOF of peptides: Past, Present and Future;** *Cordero, Marcela M.; Cornish, Timothy J.; Cotter, Robert J.; The Johns Hopkins University School of Medicine.
- MPB 083 **Progress in the design of a continuous flow - MALDI interface of a TOF - MS;** *Grigorean, Gabriela; Wronka, John; Martin, Charles; Amster, I. Jonathan; Dept. of Chemistry, University of Georgia, Athens; Bruker Instruments, Inc., Billerica.
- MPB 084 **An Inverted Perfectron Electrospray / Orthogonal TOF Mass Spectrometer;** *Gao, Q.; Rockwood, A. L.; Udseth, H. R.; Follansbee, J. C.; Smith, R. D.; Pacific Northwest Laboratory, Richland, WA 99352.
- MPB 085 **Collisional Focusing of Ions in the Electrospray TOF Mass Spectrometer;** *Krutchinsky, A.N.; Chernushevich, I.V.; Ens, W.; Spicer, V.; Standing, K.G.; University of Manitoba, Winnipeg Manitoba R3T 2N2 Canada.
- MPB 086 **The Laser Ionization GC-TOF / MS Analysis of Organometallics;** *COLBY, STEVEN; HANSER, KENT; HARRIS, WILLIAM; REILLY, JAMES; INDIANA UNIVERSITY, BLOOMINGTON IN 47405.
- MPB 087 **A new GC-TOF mass analyzer;** Scherer, Stefan; Dormagen, Jonas; Horvath, Thomas; Becker, Roman; *Wollnik, Hermann; II. Physikalisches Institut, Universitaet Giessen.
- MPB 088 **Design of a GC / TOF MS System for the Analysis of Breath Components;** *Miyares, Paul H.; Enke, Christie G.; University of New Mexico, Albuquerque NM.
- MPB 089 **Time-of-flight mirrors with ideal time-focusing in tandem mass-spectrometry;** *Makarov, Alexander; Raptakis, Emmanuel; Derrick, Peter; University of Warwick, Coventry, UK.
- MPB 090 **High Voltage Deflectors for Mass Selection on a Wire-Guide MALDI / TOF;** *Bolanos, B. J.; Robinson, J. M.; Laude, D. A.; University of Texas at Austin.
- MPB 091 **Improved Space-Focusing Using Non-linear Ion Acceleration Fields in TOFMS;** *Gardner, Ben; **Artaev, Viatcheslav; Holland, John; Michigan State University; Meridian Analytical Systems, Inc.
- MPB 092 **Design Optimization for Coaxial, Curved-Field Reflectron Time-of-Flight MS;** *Cornish, Timothy J.; Cotter, Robert J.; The Johns Hopkins University School of Medicine.
- MPB 093 **An Interleaved-Comb Ion Deflection Gate;** *Beussman, Douglas J.; Vlasak, Paul R.; **Erickson, Tina A.; Davenport, Michael R.; Enke, Christie G.; Dept. of Chemistry, Michigan State University, East Lansing, MI 48824; Dept. of Chemistry, University of New Mexico, Albuquerque, NM 87131.
- MPB 094 **Ion Selection in TOF using a Bi-polar Pulsed Electrostatic Particle Guide;** *Adams, Nathan; Just, Craig; Hanson, Curtiss; University of Northern Iowa, Cedar Falls, IA.
- MPB 095 **Comparison of Ion Detectors for MALD / I TOFMS;** *King, Richard; Owens, Kevin; **Hanton, Scott; Department of Chemistry, Drexel University, Philadelphia, PA; Air Products & Chemicals, Inc., Allentown, PA.
- MPB 096 **Tandem MS Utilizing an Orthogonal Acceleration Time of Flight MS as MS-II;** *Cerny, Ronald L.; Wulser, Kurt W.; Smith, David L.; **Bateman, Robert H.; University of Nebraska-Lincoln, Lincoln Nebraska; Fisons Instruments, Manchester UK.
- MPB 097 **MS & High Energy CID MS / MS of ESI & MALDI Ions on a Sector-TOF Instrument;** *Bateman, Robert; Green, Martin; Scott, Gary; VG Organic, Manchester, UK.
- MPB 098 **A HYBRID TANDEM MASS SPECTROMETER III;** *Duhr, Alexander; Stracke, Patric; Stadlmann, Jens; Wollnik, Hermann; II Physikalisches Institut, Universitaet Giessen.
- MPB 099 **A new 2-D / 3-D-TOF MS;** Linden, H. Bernhard; *Bamberg, Michael; LINDEN ChroMasSpec GmbH, D-28844 Leeste, Germany.

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- MPC 100 **The Evaluation of a Comprehensive MS Reference Library;** **Zaikin,

- Vladimir; Ausloos, Pierre; Lias, Sharon; Clifton, Carol; Mikaya, Anzor; *Stein, Stephen; NIST, Gaithersburg, MD; Topchiev Institute for Petrochemical Synthesis, Moscow, Russia.
- MPC 101 **Odor analysis by GC / MS / FTIR using substructure based spectral libraries.**; *Nikiforov, Alex; Remberg, Barbara; Buchbauer, Gerhard; Jirovetz, Leopold; Kvrnig, Stefan; Institute of Organic Chemistry, Univ.Vienna, Vienna Austria; Chemical Concepts GmbH., Boschstr.12., Weinheim, Germany.
- MPC 102 **The Development of an Automated System for Routine MS Analysis**; *Fink, Saul, W.; Thompson, William, L.; Slayback, John, R. B.; Bristol-Myers Squibb, New Brunswick, NJ.
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- MPC 107 **Diversity Profiling: Rapid Pharmaceutical Development Based on ESI / MS**; *Lee, Mike; Kerns, Edward; Hail, Mark; Rourick, Robyn; Starrett, Anne; Taylor, Susan; Thompson, William; Whitney, Jeffrey; Bristol-Myers Squibb PRI, P.O. Box 4000, Princeton, NJ 08543-4000.
- MPC 108 **Strategies for Rapid Molecular Weight Profiling of Pharmaceutical Products**; *Whitney, Jeffrey L.; Cadiz, Montagu W.; Edinger, Kurt J.; Klohr, Steven E.; Kerns, Edward H.; Lee, Mike S.; Bristol-Myers Squibb Pharmaceutical Research Institute, Wallingford; Bristol-Myers Squibb Pharmaceutical Research Institute, Princeton.
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- MPC 111 **MI / MS USED IN SUPPORT OF THE MANUFACTURE OF QUINOLINEDICARBOXYLIC ACID**; Lopata, Ronald J.; *Hayward, Mark J.; Thomson, Michael L.; Ruiz, Migdalia; Lafontaine, Felix; Marrero, Carlos; American Cyanamid - Agricultural Research, Princeton, NJ; Cyanamid Agricultural of Puerto Rico, Manati, PR.
- MPC 112 **On-line monitoring of an Organic Photochemical Reaction By MIMS**; *Srinivasan, N.; Wong, P.; Kasthurikrishna, N.; Cooks, R. G.; **Grossert, S.; Pincock, J. A.; Wedge, P.; Department of Chemistry, Purdue University, West Lafayette, Indiana 47907; Dept. of Chemistry, Dalhousie Univ., Halifax, Nova Scotia B3H 4J3, Canada.
- MPC 113 **Analysis of Organic Analytes in Organic Matrices by Reverse Phase MIMS**; *Bauer, Scott; Bauer, Jan; MIMS Technology Incorporated.
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- MPC 115 **UV Laser-Induced Selective Dissociation of Nitro Groups in Nitrocellulose**; *Yang, Mo; Ramsey, J. Michael; Oak Ridge National Laboratory.
- MPC 116 **MS of Prepolymers 1,10-Undecadiyne & 1,2,10,11-C₁₃-1,10-Undecadiyne**; *Robbins, Ronny; Berg, Fred; ERDEC, U.S. Army, Aberdeen Proving Ground, MD.
- MPC 117 **THE TMS-ESTERS OF DECENOIC ACID ISOMERS; DOUBLE BOND POSITION & GEOMETRY**; *Jalonen, Jorma; **Mdkeld, Mauri; Hassila, Heikki; Haapaniemi, Esa; Joensuu, Pdivi; Dept. of Chemistry, Univ. of Oulu, FIN-90570 Oulu, Finland; Present Addr: Oulu Reg.Inst. Occup. Health, Oulu, Finland.
- MPC 118 **Development of GC-MS Determination of Nicotinic Acid and Nicotinamide**; Dame, Amy D.; Wiberg, Karin; Jacobson, Myron K.; *Pyrek, Jan St.; College of Pharmacy, University of Kentucky, Lexington, KY.
- MPC 119 **Identifying Polyol Borate Ester Complexes by Negative Ion ESI MS / MS**; *Shay, Brian J.; Falk, Nancy; Kalinoski,

- Henry T.; Unilever Research US Edgewater, NJ.
- MPC 120 **Electrospray / Ion Trap MSn for Structure Elucidation Of Cationics**; *Strife, Robert; **Schwartz, Jae; Bier, Mark; Zhou, Joe; The Procter & Gamble Co, Cincinnati, OH 45253.
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- MPC 124 **Specific Structural Features which Promote Cluster Formation in FAB-MS**; *Sharp, T.R.; Pfizer Central Research, Groton, Connecticut.
- MPC 125 **Study of Cobalt Complexes with Tetradentate Schiff Bases by IS- And FAB-MS**; *Raffaelli, Andrea; Pucci, Sergio; Di Sacco, Sonia; Isola, Mauro; Centro CNR Macromolecole Stereordinate ed Otticamente Attive, Pisa, Italy; Dipartimento di Chimica e Chimica Industriale, Pisa, Italy.
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- MPC 127 **A Direct Method to Quantitate Fatty Acids in Complex Mixtures**; *Ai, Jiu; US Tobacco Manufacturing Company, Inc.
- MPC 128 **A NEGATIVE ION STUDY OF INDOLE AND QUINOLINE USING AN ASGDI SOURCE**; *Cairns, Stuart N.; Langford, Marian L.; Todd, John F.J.; The Chemical Laboratory, University of Kent, Canterbury, Kent, CT2 7NH, UK.
- MPC 129 **FAB-MS of Protected Steroids and Bile Acids Using Alkali Metal Addition**; Aggarwal, Suresht K.; Pogue, Robert T.; *Pyrek, Jan St.; MS Facility, College of Pharmacy, University of Kentucky, Lexington, KY.
- MPC 130 **Alkali metal + Ions in FAB Spectra of Protected Bile Acid Glucosides**; Aggarwal, Suresht K.; Pogue, Robert T.; *Pyrek, Jan St.; MS Facility, College of Pharmacy, University of Kentucky, Lexington, KY.
- MPC 131 **Fragmentation of 1,5-dialkyl-3,7-diphenylbispidones under electron impact**; *Tretyakova, Natalia; Vatsadze, Sergey; **Lebedev, Albert; Zyk, Nikolay; Zefirov, Nikolay; Hass, J. Ronald; University of North Carolina, Chapel Hill; Moscow State University.
- MPC 132 **Trace Analysis of Degraded Antibiotics by ESI-LC / MS**; *Yoo, Jong Shin; Kim, Jin Young; **Kim, Sung Ho; Korea Basic Science Center, 224-1, Eoundong, Yuseongku, Taejeon, Korea; Dept. of Chemistry, Soonchunhyang Univ., Onyang, P.O. Box 97, Asan, Korea.
- MPC 133 **Semi-Quantitative Analysis of Pharmaceutical Product Impurities by API / LCMS**; *Wakefield, Michael; Sanders, Mark; Mylchreest, Iain; Finnigan MAT San Jose, CA 95134-1991.
- MPC 134 **Predictive Impurity Profiling of Pharmaceuticals Using LC / MS**; *Thompson, William L.; Venesky, John S.; Volk, Kevin (2); Klover, Steven E. (2); Kerns, Edward H. (2); Lee, Mike S. (3); Bristol-Myers Squibb, New Brunswick, NJ; Bristol-Myers Squibb, Wallingford, CT (2); Princeton, NJ (3).
- MPC 135 **The Role of Mass Spectrometry in Stress-Testing of Pharmaceuticals**; *Kemp, Craig; Cooke, Gary; Eli Lilly and Company, Indianapolis.
- MPC 136 **PROFILING SOTALOL IMPURITIES AND DEGRADANTS USING A STANDARD LC / MS METHOD**; *Volk, Kevin J.; Kerns, Edward H.; Hill, Susan E.; Wilson, Terry; Behme, Robert; Brooke, Dana; Lee, Mike S.; Bristol-Myers Squibb Pharmaceutical Research Institute, Wallingford; Bristol-Myers Squibb Pharmaceutical Research Institute, Evansville.
- MPC 137 **Identification of unknowns compounds in topiramate tablet by IC-ESI-MS**; *Xiang, Xinzhen Jane; Ko, Chan Y.; Guh, H. Y.; Analytical Research and Development The R.W. Johnson Pharm. Res. Inst.
- MPC 138 **Pharmaceutical Applications of Ion-Spray LC / MS for Cyclodextrin Analysis**; *Visentini, Josie; Filosa, Angelo; Rousseau, Caroline; Winters, Conrad; Merck Frosst Centre for Therapeutic Research.
- MPC 139 **OLIGOMER DISTRIBUTION in PHOTOFRIN(PORFIMER SODIUM)**; *Siegel, Marshall; Tabei, Keiko; Berkenkamp, Stefan; **Hillenkamp, Franz; Tsao, Rushung; Ingedoh, Arnd;

Pastel, Michael; American Cyanamid;
University of Munster.

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- MPD 140 **Use of MS Coupled with a Solids Insertion Probe to Pre-Screen Soil Samples;** *Check, Catherine E.; Bach, Stephan B.H.; University of Texas at San Antonio.
- MPD 141 **Analysis of Soils - Part I: Soil Dynamics and Climatic Change;** *Howald, Markus; Schuerch, Stefan; Schlunegger, Urs P.; Department of Organic Chemistry, Berne, Switzerland.
- MPD 142 **Analysis of Soils - Part II: Determination of Saccharides by MALDI-TOF-MS;** *Schuerch, Stefan; Howald, Markus; Schlunegger, Urs P.; Department of Organic Chemistry, Berne, Switzerland.
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- MPD 144 **Rapid Analysis of Fast GC Effluents by Time-of-Flight MS;** *Borgerding, Anthony J.; Wilkerson, Charles W.; Los Alamos National Laboratory, Los Alamos, NM.
- MPD 145 **GC / MS and SPC: A Way To Improve Quality of Environmental Analyses;** *Gardner, Ben; **Herron, Nelson R.; Sparkman, O. David; Artaev, Viatcheslav; Meridian Analytical Systems, Inc.; Lockheed Environmental Systems & Technologies Co.
- MPD 146 **A STUDY OF AMBIENT AIR BY AEROSOL-TIME-OF-FLIGHT MASS SPECTROMETRY;** *Lloyd, Patrick; Nordmeyer, Trent; Prather, Kimberly; University of California, Riverside.
- MPD 147 **Analysis of Single Inorganic Salt Particles Using TOF MS;** *Salt, Kimberly; Prather, Kimberly; University of California, Riverside.
- MPD 148 **Particle Size Analysis By Light Scattering and Aerodynamic Sizing Methods;** *Noble, Christopher; Salt, Kimberly; Prather, Kimberly; University of California, Riverside.
- MPD 149 **On-Line Single Particle Analysis of Environmental Tobacco Smoke;** *Morrical, Bradley; Prather, Kimberly; University of California, Riverside Riverside, CA.
- MPD 150 **Gas-phase Modeling of Scrap Tire Pyrolysis Reactions;** *Burrell, Tim; Phillips, Eugene; Rich, Michaela; Hanson, Curtiss; University of Northern Iowa, Cedar Falls, IA, 50614.
- MPD 151 **Analysis of Carbonyls: Intermediates of Chemical Oxidation Reactions;** *Feinberg, Thomas N.; Charles, M. Judith;

Dept. Env. Sci. & Eng., Univ. of North Carolina at Chapel Hill, Chapel Hill.

- MPD 152 **A Study of the Oxidation of Heterocyclic Compounds using GC-MS Techniques;** *Morris, Jackie; Clench, Malcolm; Allen, David; Environmental Research Centre, Sheffield Hallam University, Sheffield.
- MPD 153 **A MEMBRANE INLET SYSTEM FOR MONITORING TRACE ENVIRONMENTAL POLLUTANTS;** *Clarke, Nigel J.; Todd, John F.J.; The Chemical Laboratory, University of Kent, Canterbury, Kent, CT2 7NH, UK.
- MPD 154 **Chemical Ionization of Explosives with Supercritical Fluid Systems;** *Lewis, Tanya M.; Leibman, Chris P.; Fletcher, Michael A.; Los Alamos National Laboratory, Los Alamos, NM 87545.
- MPD 155 **Solid Phase Microextraction (SPME)-GC / MS of Proliferation Compounds;** *Alcaraz, Armando; Andresen, Brian D.; Lawrence Livermore National Laboratory, Livermore, CA.
- MPD 156 **The Detection of TNT and TNT Metabolites by Electrospray Mass Spectrometry;** *Carlson, Joel; Vourros, Paul; Kaplan, David; Northeastern University, Dept. of Chem., Boston, MA 02115; US Army Natick R, D & E Center, Natick, MA 01760-5020.
- MPD 157 **Trace Analysis of Explosives by LC / MS with a Particle Beam Interface;** *Cappiello, Achille; Famiglini, Giorgio; **Lombardozzi, Antonietta; Massari, Alessandro; Vadal', Gianni Giulio; Istituto di Scienze Chimiche, Universit' di Urbino, Urbino, Italy; Dir. Centrale Polizia Criminale, Servizio Polizia Scient., Roma, Italy.
- MPD 158 **Environmental Analysis by Flow-injection Tandem Mass Spectrometry;** *Fili-genzi, Michael; Larson, Michael; Quanterra Environmental Services.
- MPD 159 **Comparison of HPLC-MS Interfaces in the Determination of Heterocyclic PACs;** *Thomas, Darren; Sim, P. Greig; **Benoit, Frank M.; National Research Council Canada; Health Canada.
- MPD 160 **Use of Two SPE-GC / MS Methods for Field Isolation and Quantitation of PAH;** *Furlong, Edward T.; Koleis, Janece C.; Gates, Paul M.; National Water Quality Laboratory, U.S. Geological Survey, Arvada, CO.
- MPD 161 **VARIOUS MASS SPECTRAL TECHNIQUES FOR THE ANALYSIS OF NITRO-PAH;** *Miles, Walter; Chiu, Chung; Environment Canada, Ottawa, Ontario.

- MPD 162 **Determination of Nitrated Polycyclic Aromatic Hydrocarbons in Tree Bark;** *Clench, Malcolm; Douce, David; Pragnell, Charlton; Cooke, Michael; Environmental Research Centre, Sheffield Hallam University, Sheffield.
- MPD 163 **Factors Effecting the Analysis of Organic Pollutants by Particle Beam LC-MS;** *Clench, Malcolm; Leathard, David; **White, John; Brown, Richard; Environmental Research Centre, Sheffield Hallam University, Sheffield U.K; Health and Safety Laboratories, Sheffield U.K.
- MPD 164 **Distributions of Aromatic Hydrocarbons in Petroleum and Source Rocks;** *McDonald, Thomas; Requejo, Adolfo; Denoux, Guy; Allan, Katherine; Sassen, Roger; College Station, Texas 77845.
- MPD 165 **Distributions of Environmental Contaminants in Gulf of Mexico Oysters;** *Jackson, Thomas; Wade, Terry; Sericano, Jose; Garcia-Romero, Bernado; Brooks, James; GERG at Texas A & M University.
- MPD 166 **Characterization of Creosotes;** *Jackson, Thomas; Wade, Terry; **Butala, John; GERG at Texas A & M University; Duqueshe University.
- MPD 167 **Environmental Genotoxins by LC / TSP / MS of DNA-Adducts Formed In Vitro.;** *Kuehl, Douglas; Serrano, Jose; U.S. EPA Duluth, MN 55804.
- MPD 168 **Analysis of Serum PAHs and PAH Adducts by LC / MS;** *McClure, P. Cheryl; Barr, John R.; Maggio, Vincent L.; Sirimanne, Sarath; Ma, Li; Patterson; Jr., Donald G.; Centers for Disease Control.
- MPD 169 **MS Analysis of Pesticides by Combined On-line Photodegradation and LC-MS;** *Volmer, Dietrich A.; Wilkes, Jon G.; USFDA - National Center for Toxicological Research, Jefferson, AR.
- MPD 170 **Multiresidue Analysis of Pesticides by Electrospray LC-MS and LC-MS / MS;** *Volmer, Dietrich A.; Wilkes, Jon G.; USFDA - National Center for Toxicological Research, Jefferson, AR.
- MPD 171 **Determination of Carbendazim by Immunoaffinity Extraction and LC / LC / MS / MS;** *Bean, Karen; Henion, Jack; Cornell University, Ithaca, NY 14850.
- MPD 172 **Limitations and Challenges in LC / MS for the Analysis of Carbofuran;** *Honning, M.; Barcelo, D.; van Baar, B. L. M.; Brinkman, U.A.Th.; Dept. Environmental Chemistry, CID/CSIC, Barcelona, SPAIN; Analytical & Organic Chemistry, Free Univ., Amsterdam, THE NETHERLANDS.
- MPD 173 **Analysis of organophosphates using a trochoidal electron monochromator MS;** *Mazurkiewicz, Paul; Laramée, Dr. James; Eichinger, Dr. Peter; Deinzer, Dr. Max; Oregon State University.
- MPD 174 **Analysis of Soil Metabolites Utilizing Narrow Bore LC / MS / MS Techniques;** *McGown, Steven; Delgado, Nelson; BASF Corporation, Research Triangle Park, NC.
- MPD 175 **LC / MS of Atrazine and its Hydroxylation Metabolite Using Electrospray;** *Cai, Zongwei; Cerny, Ronald; Spalding, Roy; Department of Chemistry; Water Center/Environmental Program.
- MPD 176 **Determination of Atrazine and Metabolites Using GC / MS / MS.;** *Heikes, David; Food and Drug Administration, Lenexa, KS.
- MPD 177 **Determination of Triazine Type Herbicides in Coastal Waters by HRGC / HRMS;** *Cardinali, Piero; Sericano, Jose; Wong, Jennifer; Wade, Terry; Geochemical and Environmental Research Group.
- MPD 178 **Identification of Biodegradation Products of Carbazole by Mass Spectrometry;** *Jayasimhulu, Koka; Schneider, Joanne; Xue, Weiling; Grosser, Robert; Warshawsky, David; Dept. of Environmental Health, University of Cincinnati, OH.
- MPD 179 **Analysis of Carbamate and Phenylurea Pesticides by Particle Beam LC-MS.;** *Ramesh, Rao; Fisons Instruments VG Organic, Manchester, UK.
- MPD 180 **Trace Determination of Sulfonyl Ureas in Soil.;** *Li, Lily Y.T.; Campbell, Dale; Henion, Jack; Advanced BioAnalytical Services, Ithaca, NY 14850.
- MPD 181 **Comparison of Electrospray and Thermospray for the Analysis of Herbicides;** *Lamaat, Shalaby; Robert, Croes; Michael, Wadsley; Debbie, Armbrust; DuPont Agricultural Products, Wilmington.
- MPD 182 **Determination of Myclobutanil by GC / MS, GC / HRMS, and MS / MS;** Eitzer, Brian; Pylypiw Jr., Harry; **Moore, Colin; *Mattina, Mary Jane; The Connecticut Agricultural Experiment Station, New Haven, CT; Uniroyal, Middlebury, CT.
- MPD 183 **NEGATIVE-ION UNIMOLECULAR DISSOCIATION OF ESTERS OF A HERBICIDE ACID;** HEADLEY, JOHN V.; *PERU, KERRY M.; NATIONAL HY-

- DROLOGY RESEARCH CENTRE; SASKATOON, SASK., CANADA.
- MPD 184 **Determination of Hydrolysis Degradates of Cloransulam-Methyl by ESI LC / MS;** *Balcer, Jesse L.; Brown, Stephen M.; Lewer, Paul; DowElanco, Indianapolis IN 46268.
- MPD 185 **The Dissipation of Cloransulam-Methyl in Soil as Determined by ESI LC / MS / MS;** *Brown, Stephen M.; Balcer, Jesse L.; Duebelbeis, Dennis; Thomas, Angela; DowElanco, Indianapolis IN 46038.
- MPD 186 **GC / MS Analysis of Alkyl Methylphosphonic Acids;** *Rohrbaugh, Dennis; U.S. Army Edgewood RD & E Center, APG, MD 21010-5423.
- MPD 187 **DETERMINATION OF TRIADIMEFON AND IMIDACLOPRID IN WHITE PINE BY GC / MS;** *MacDonald, Linda, M.; Rainbird, B.J.; Meyer, Timothy, R.; Forest Pest Management Institute, Canadian Forest Service, NRCan; Ontario Forest Research Institute, Ontario Ministry of Natural Resources.
- MPD 188 **Determination of Triclopyr / Metabolites in Environmental Matrices by GC / MSD;** *Olberding, Edward L.; Harnick, Barry J.; Foster, Dale R.; **McNett, Debra A.; DowElanco, North American Environmental Chemistry, Indianapolis, IN; Dow Chemical Company, Health & Environmental Sciences, Midland, MI.
- MPD 189 **Determination of Clopyralid in Water With Solid-Phase Extraction and GC / MSD;** *Harnick, Barry; Olberding, Edward; DowElanco, North American Environmental Chemistry, Indianapolis, IN.
- MPD 190 **The Evaluation of a Benchtop API LC / MS System for Environmental Analyses;** *Bethem, Robert; **Sakuma, Takeo; Shushan, Bori; ALTA Analytical Lab, 5070 Robert J. Mathews Pkwy., El Dorado Hills, CA 95762; PE SCIEX, 55 Glen Cameron Rd., Thornhill, ON Canada L3T 1P2.
- MPD 191 **Analysis of Pyrethroid Insecticides by Ion Trap GC / MS / MS;** *Bauerle, Gerald; Ray, Kenneth; Brodbelt, Jennifer; University of Texas at Austin.
- MPD 192 **Compounds Produced by Motor Burnouts of Refrigeration Systems;** *Koester, Carolyn; Hawley-Fedder, Ruth; Foiles, Linda; Lawrence Livermore National Laboratory, Livermore, CA.
- MPD 193 **Collisionally-Induced Fragmentation of Chlorinated n-Paraffins;** *Tomy, Gregg; Westmore, John; **Muir, Derek; Stern, Gary; University of Manitoba, Winnipeg.; Freshwater Institute, Winnipeg.
- MPD 194 **LC-MS / MS identification of the major human urinary metabolite of alachlor;** *Driskell, William J.; Hill, Robert H.; Shealy, Dana B.; Hull, R. Delon; Centers for Disease Control.
- MPD 195 **Determination of Chlordane in Soil by ECNI MS and ECNI MS / MS;** *Brumley, William; Shafter, Elizabeth; LaTorre, Estrella; Marcus, Alvin; U.S. EPA, Las Vegas, NV.
- MPD 196 **Structural Characterization of Toxaphene Congeners by GC / MS;** *Benoit, Frank M.; Driega, Alex; **Malaiyandi, Murugan; Health Canada, Ottawa ON Canada; Carleton University, Ottawa ON Canada.
- MPD 197 **Characterization of Major Chlorinated Bornanes in Ring Seal Blubber;** **Loewen, Mark; *Stern, Gary; Muir, Derek; Westmore, John; Parlar, H; Freshwater Institute Winnipeg; University of Manitoba Winnipeg.
- MPD 198 **Where in the Great Lakes is Toxaphene Going?;** *Howdeshell, Michael; Glassmeyer, Susan; Myers, Tanya; Hites, Ronald; Indiana University, Bloomington.
- MPD 199 **Optimal Ion Trap MS / MS Parameters for the Analysis of Dioxins and Furans;** *Plomley, Jeffry B.; **Mercer, Roger S.; March, Raymond E.; Department of Chemistry, Trent University, Peterborough, On. Canada K9J 7B8; Ontario Ministry of the Environment and Energy, Etobichoke, Ont. Canada.
- MPD 201 **Development of a Modernized HRMS Environmental Method for PCBs;** *Donnelly, Joseph R.; Grange, Andrew H.; Nichol, Greg; Herron, Nelson; **Brumley, William C.; Lockheed Environmental Systems & Technologies Company; U.S. E.P.A. Environmental Monitoring Systems Laboratory, Las Vegas.
- MPD 202 **Elemental Compositions from Mass Peak Profiles of M, M + 1 and M + 2 Ions;** *Grange, Andrew H.; Donnelly, Joseph R.; **Sovocool, G. Wayne; Brumley, William C.; Lockheed Environmental Systems and Technologies Company; U.S.E.P.A Environmental Monitoring Systems Laboratory, Las Vegas.
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- Spray Ionization**
- MPE 203 **Effect of Solution Additives and Denaturants on Peptide and Protein ESI-MS;** *Smelyanskiy, Yanina; **Ogorzalek Loo,

- Rachel R.; Andrews, Philip C.; Univ. of Michigan, Protein Structure Facility, Ann Arbor, MI 48109; Univ. of Michigan, Dept. Biological Chemistry, Ann Arbor, MI 48109.
- MPE 204 **Desolvation of Noncovalently-Bound Complex Ions for ESI-MS Analysis;** *Loo, Joseph A.; **Ogorzalek Loo, Rachel R.; Parke-Davis Pharm. Res., Div. Warner-Lambert Co. Ann Arbor, MI 48105; University of Michigan, Dept. of Biological Chemistry, Ann Arbor, MI 48109.
- MPE 205 **Noncovalent Complex Formation of Cyclodextrins studied by ESI MS;** *Penn, Sharron G.; Goodall, David M.; Monnig, Curtis A.; Loran, John S.; Department of Chemistry, University of York, UK.; Department of Chemistry, University of California, Riverside.
- MPE 206 **Non-Covalent Complexes formed between Acyl CoA Binding Protein and CoAs;** * Robinson, Carol; Kragelund, Birthe; Knudsen, Jen; Aplin, Robin; Poulsen, Fleming; Dobson, Christopher; Oxford Centre for Molecular Sciences, University of Oxford.
- MPE 207 **Source of the Ion at M / Z 622 in TFA-Fix;** **Ijames, Carl F.; Markey, Sanford P.; Dutky, Robert C.; *Fales, Henry M.; National Institutes of Health Bethesda, MD.
- MPE 208 **Electrospray of Borane Salts; High Molecular Weight Clusters and Reactions;** *Hop, Cornelis E.C.A.; Saulys, Dovas A.; Gaines, Donald F.; Department of Chemistry, University of Wisconsin - Madison.
- MPE 209 **Comparison of ESI and LSI MS / MS in the Analysis of Newborn Blood Spots;** *Chace, Donald; Hillman, Steven; Millington, David; Stevens, Robert; Duke University Medical Center.
- MPE 210 **Monitoring reactions of nitric oxide with peptides and proteins by ESI-MS;** *Mirza, Urooj A.; Lander, Harry M.; Chait, Brian T.; The Rockefeller University, New York City; Cornell University Medical College New York City.
- MPE 211 **Paired Ion ESI of Borane Neutron Capture Agents;** *Singh, Padma; Swenson, David; **Schweingruber, Hans; Laine, Roger; Louisiana State University, Baton Rouge, LA; Glycomed, Inc., Alameda, CA.
- MPE 212 **Negative ESI / MS Enhancement of Primary Amines with TFA / TFE Derivatization;** *Fujiwara, Hideji; Nadeau, Ronn G.; Chott, Robert C.; Solsten, R. Thomas; Monsanto Co., St. Louis, MO 63198.
- MPE 213 **Selectivity and Binding Mode of DNA Interacting Molecules Studied by ESI-MS;** *Gale, David C.; Camp II, David G.; Smith, Richard D.; Pacific Northwest Laboratory, Richland, WA 99352.
- MPE 214 **Characterization of Large Glycoproteins Using HPLC / ES-MS;** *Huang, Lee; Paiva, Tony; Ramadas, Bhat; Wong, Mel; Pharmaceutical Research, Bayer Co.
- MPE 215 **Fragmentation and CID Electrospray Spectra of Antineoplastic Agents;** *Roboz, John; Yu, Qitao; Mount Sinai School of Medicine.
- MPE 216 **Factors Affecting ESI-MS of Nucleobases and Nucleosides;** *Yen, Ten-Yang; Voyksner, Robert D.; Charles, M. Juidth; Dept. of Environ. Sci.& Eng. Univ. of North Carolina, Chapel Hill, NC27599-7400.
- MPE 217 **New Approach to Determine Modifications in DNA: CZE / MS of Oligonucleotides;** Janning, P.; Schrader, W.; Pesch, R.; **Muenster, H.; *Linscheid, M.; ISAS - Institut fuer Spektrochemie, Dortmund, Germany; Finnigan MAT, Bremen, Germany.
- MPE 218 **Structure Elucidation of Oligonucleotides Using CZE / ESI MS and Skimer CID;** Siethoff, C.; Schrader, W.; Pesch, R.; **Muenster, H.; *Linscheid, M.; ISAS - Institut fuer Spektrochemie - Dortmund, Germany; Finnigan MAT Bremen, Germany.
- MPE 219 **Thermodynamical studies of metal self-assembled complexes by ES-MS;** *Dupont, Annick; Leize, Emmanuelle; Marquis-Rigault, Annie; Körmer, Roland; Funeriu, Daniel; Lehn, Jean-Marie; Van Dorsselaer, Alain; Laboratoire de Spectrométrie de Masse Bio-Organique-Strasbourg (France); Laboratoire de Chimie Supramoléculaire-Strasbourg (France).
- MPE 220 **Ion Labeling Study of Self-assembled Supramolecular Species by ESMS;** *Leize, Emmanuelle; Russell, K.C.; Lehn, Jean-Marie; Van Dorsselaer, Alain; Laboratoire de Spectrométrie de Masse Bio-Organique - Strasbourg (France); Laboratoire de Chimie Supramoléculaire-Strasbourg (France).
- MPE 221 **Retrospective Analysis of Hyperphenylalaninemias by LSI and ESI MS / MS;** *Chace, Donald; Hillman, Steven; Sakuma, Takeo; LeBlanc, Yves; **Shushan, Bori; Duke University Medical Center; PE Sciex.

- MPE 222 **Electrospray Ionization Mass Spectrometric Study of Host-Guest Complexes;** *Ramanathan, Ragulan; **Prokai, Laszlo; Center for Drug Discovery, Univ. of Fla., Gainesville, FL 32610-0497; Center for Drug Discovery, Univ. of Fla., Gainesville, FL 32610-0497.
- MPE 223 **On-line Electrochemistry / Electrospray MS: Study of Oxidation of PAHs;** *Xu, Xiaoming; Lu, Wenzhe; Suleiman, Ahmad A.; Cole, Richard B.; Dept. of Chemistry, University of New Orleans, New Orleans, LA 70148 USA; Dept. of Chemistry, Southern University-Baton Rouge, Baton Rouge, LA 70813.
- MPE 224 **Effects of Anion Encapsulation by Katapinates on Electrospray Mass Spectra;** *Giordani, Anne B.; Parke-Davis Pharm. Res., Div. of Warner-Lambert Co., Ann Arbor, MI 48105.
- MPE 225 **PROBING THE OLIGOMERIC STRUCTURE OF 4OT USING "NATIVE" ESI-TOFMS;** *Fitzgerald, Michael C.; **Chernushevich, Igor; Whitman, Christian P.; Kent, Steven B.H.; The Scripps Research Institute, La Jolla, CA; University of Manitoba, Winnipeg, Manitoba, Canada.
- MPE 226 **Investigation of Cyclodextrin-Metal Cation Complexes using ESI and FTICR MS;** *Kage, David; Watson, Cliff; Prokai, Laszlo; Eyler, John; Department of Chemistry, University of Florida, Gainesville, FL; Center for Drug Delivery, University of Florida, Gainesville, FL.
- MPE 227 **HPLC - Electrospray Mass Spectrometry of Flavonol Glycosides in Hops;** *Saegesser, Martin; Deinzer, Max L.; Department of Agricultural Chemistry, Oregon State University, CORVALLIS.
- MPE 228 **SULFATED OLIGOSACCHARIDES ANALYSIS: POTENTIALITY OF ESI-MS vs MALDI-TOF MS;** *UZABIAGA, Frangoise; MONTEIRO, Candida; PETITOU, Maurice; **PROME, Jean- Claude; PICARD, Claudine; SANOFI RECHERCHE 195 Route d'Espagne 31036 TOULOUSE CEDEX FRANCE; LPTF C.N.R.S. 205 Route de Narbone 31077 TOULOUSE CEDEX FRANCE.
- MPE 229 **Detection of Photosubstitution Intermediates of Ru(II) Diimine Complexes;** *Arakawa, Ryuichi; Tachiyashiki, Satoshi; Matsuo, Takekiyo; Osaka University, Toyonaka, JAPAN.
- MPE 230 **Complexes of Angiotensin II and Transition-Metal (II) Ions Formed By ESI;** *Sullards, Cameron; Adams, Jeanette; Department of Chemistry, Emory University, Atlanta, GA 30322.
- MPE 231 **Amino Acid Coordination to Cu(II)-diimines: Structures and CAD Mechanisms;** *Gatlin, Christine, L.; Turecek, Frantisek; Vaisar, Tomas; University of Washington, Seattle, WA; Molecumetics, Bellevue, WA.
- MPE 232 **Peptide Coordination to Cu(II)-diimines: Structures and CAD Mechanisms;** *Gatlin, Christine L.; Turecek, Frantisek; Vaisar, Tomas; University of Washington, Seattle, WA.
- MPE 233 **Analysis of Metal Chelates by Electrospray Ionization Mass Spectrometry;** *Wahl, Karen; Stromatt, Robert; Blanchard, David; Pacific Northwest Laboratory, P.O. Box 999, Richland, WA 99352.
- MPE 234 **Production of Coordinated 3d Transition Metal Ions by ESMS;** *Xu, Yaodong; Zhang, Xin; Yergey, Alfred L.; LTPB, NICHD, NIH, Bethesda, MD 20892
- MPE 235 **Characterization of Organometallic Complexes by ESI / Sector MS;** *Tong, Huayi; Ng, Ken; Rodebaugh, Ron; Kuell, Chris; Shum, Sai; Pastor, Steve; Ciba-Geigy Corp., Ardsley, NY.
- MPE 236 **Accurate Mass Measurement of Peptide Ions with a Magnetic Sector Instrument;** *D'Agostino, Paul A.; Hancock, James R.; Provost, Lionel R.; Defence Research Establishment Suffield, Medicine Hat, CANADA.
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- Proteins & Peptides**
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- MPF 237 **Some Important Effects of MALDI of Small Proteins and Peptides;** *Zhu, Y. F.; Lee, K. L.; Tang, K.; Allman, S. L.; Taranenko, N. I.; Chen, C. H.; Oak Ridge National Laboratory, Oak Ridge, Tennessee USA.
- MPF 238 **Matrix Solution Effects on the MALDI-MS of Peptides and Proteins;** *Cohen, Steven L.; Chait, Brian T.; The Rockefeller University, New York City.
- MPF 239 **Study of Oxidation Reactions of Selenomethionyl Peptides by MS;** *Wang, Rong; Mirza, Urooj A.; Birken, Steven; Chait, Brian T.; The Rockefeller University; College of Physicians & Surgeons of Columbia University.
- MPF 240 **Mapping of B-Amyloid Peptide using Gelatinase;** *Woods, Amina; Cotter, Robert; Ball, M.J.; Roher, Alex; The Johns Hopkins University School of Medicine; Wayne State University School of Medicine.

- MPF 241 **Electrospray Mass Spectrometric Studies on Brain Delivery of Neuropeptides**; *Prokai, Laszlo; Kim, Ho-Seung; Prokai-Tatrai, Katalin; Bodor, Nicholas; Center for Drug Discovery, University of Florida.
- MPF 242 **Characterization of Iron-binding Siderophores from *M. tuberculosis***; *Gibson, Bradford; Moore, Christopher; Wong, Diane; Gobin, Jovana; Reeve, Jr., Joseph; Horwitz, Marcus; University of California, San Francisco.
- MPF 243 **HEMORPHINS IN BLOOD AND BRAIN STUDIED BY MICRODIALYSIS / ES / MS**; *Andren, Per E.; Sander-son, Katarina; Caprioli, Richard M.; Nyberg, Fred; University of Texas Medical School, Houston, TX.
- MPF 244 **MS Detection of a new beta-Endorphin-containing Protein in Bovine Pituitary**; *Desiderio, Dominic; Yan, Lin; Tseng, Jih-Lie; University of Tennessee, Memphis.
- MPF 245 **A Quantitative LC / ESI / MS / MS Method for a Bioactive Peptide in Human Plasma**; *White, Robert J.; Oglesby, Thomas D.; Taylor, Paul A.; Florance, James; Wilhelm, Jeffrey A.; Schwartz, Jae C.; Uhrich, Mark D.; Taylor Technology, Inc., Princeton, NJ.
- MPF 246 **Mass spectrometric analysis of impurities in peptide synthesis**; Chao, Betty; Jiang, Kate; *Papayannopoulos, Ioannis A; Biogen Inc., 14 Cambridge Center, Cambridge, MA 02142.
- MPF 247 **Analysis of Crude Synthetic Peptide Mixtures by IonSpray Mass Spectrometry**; *Nuwaysir, Lydia; McCandless, Jacqueline; Noble, Dick; Banda, Phil; Chen, Ling; McLean, Matthew; PERKIN ELMER, Applied Biosystems Division, Foster City, CA.
- MPF 248 **Tandem Mass Spectrometry of Metal-Peptide Complexes.**; *Summerfield, Scott; Dale, Vanessa; Despeyroux, Dominique; Jennings, Keith; Department of Chemistry, University of Warwick, Coventry, CV4 7AL, UK.
- MPF 249 **Loss of the C-Terminal Amino Acid from Transition Metal-Peptide Complexes**; *Reiter, Alex; Adams, Jeanette; Department of Chemistry, Emory University.
- MPF 250 **Intrinsic Coordination between Co(II) and Ni(II) and Histidine Peptides**; *Reiter, Alex; Adams, Jeanette; Department of Chemistry, Emory University.
- MPF 251 **Peptide Adsorption at Gas-Liquid Interfaces Probed by FAB Mass Spectrometry**; *van Breemen, Richard B.; Powers, Daniel D.; Kilpatrick, Peter K.; Carbonell, Ruben G.; Univ. of Illinois at Chicago, Dept. of Medicinal Chemistry & Pharmacognosy.
- MPF 252 **FAB MS of Oxytocin, Deaminoxytocin and Arginine Vasopressin**; *Pokrovskiy, Valeriy; Galagan, Natalia; Ostrovskaya, Galina; Rybal'chenko, Vladimir; Institute for Surface Chemistry, Academy of Sciences, Kiev, UKRAINE; Institute of Physiology, Shevchenko University, Kiev, UKRAINE.
- MPF 253 **Processing of Dynorphin A (1-17) in Human and Monkey Blood Studied by MS**; *Yu, Jim; **Butelman, Eduardo; Woods, James; Kreek, Mary Jeanne; Chait, Brian T.; The Rockefeller University; University of Michigan.
- MPF 254 **Analysis of heterogenous peptide mixtures with MALDI-MS and LC / MS**; *Raida, Manfred; Heine, Gaby; Neitz, Susanne; Forssmann, Wolf-Georg; Niedersaechsisches Institut fuer Peptid-Forschung/Hannover.
- MPF 255 **MALDI MS as a Tool in the Characterization of E. Coli RNA Polymerase**; *Feny, David; Severinov, Konstantin; Severinova, Elena; Darst, Seth; Chait, Brian T.; The Rockefeller University, New York, NY 10021.
- MPF 256 **Peptide Mapping and MS / MS Analysis of IgG2b containing 2H-Labeled Leucine**; *Hirayama, Kazuo; Akashi, Satoko; Noguchi, Kazuyoshi; Yuji, Reiko; Tagami, Uno; Kato, Koichi; Shimada, Ichio; Arata, Yoji; Central Res. Labs., Ajinomoto Co., Inc.
- MPF 257 **Structural Characterization of IgG Carrying Allotype-j**; *Akashi, Satoko; Noguchi, Kazuyoshi; Yuji, Reiko; Tagami, Uno; Kato, Koichi; Shimada, Ichio; Arata, Yoji; Hirayama, Kazuo; Central Res. Labs., Ajinomoto Co., Inc.
- MPF 258 **Monitoring Antibody Catalyzed Reactions and Interactions**; *Siuzdak, Gary; Krebs, Joseph F.; Benkovic, Stephen J.; Stewart, Jon D.; Strupp, Christian; Hilvert, Don; Dyson, H. Jane; The Scripps Research Institute, La Jolla.
- MPF 259 **Investigation of Mouse Urinary Proteins Using Electrospray Ionization**; *Cox, Kathleen A.; Gaskell, Simon J.; Robertson, Duncan H.L.; Beynon, Robert J.; The Michael Barber Centre for Mass Spectrometry; UMIST; Manchester UK.
- MPF 260 **Analysis of a Therapeutic Monoclonal Antibody by HPLC, MALDI-TOF and ESI / MS**; *Chan, Stephen; Park, Sun-

- gAe; Burinsky, David; R.W. Johnson Pharmaceutical Research Institute.
- MPF 261 **Identifying Human Tear Cytokines by Immunoaffinity Chromatography / MALDI-TOF;** *A., Brockmann; S., Hirsh; R., Kaswan; R., Orlando; CCRC, UGA, 220 Riverbend Rd., Athens, GA, USA; College of Veterinary Medicine, UGA, Athens, GA, USA.
- MPF 262 **Characterization of Recombinant Human Interferon Alpha-2 by ESI LC / MS;** *Heimark, L.; Huang, E.; Pramanik, B.; Nagabhushan, T.L.; Schering-Plough Research Institute.
- MPF 263 **Mass Spectrometric Characterization of the rhM-CSF Receptor Binding Site;** Kalkum, Markus; Yamamoto, Ralph; Schreurs, Jolanda; Deinzer, Max L.; *Glocker, Michael O.; University Konstanz Faculty of Chemistry POBox 5560M732 78434 Konstanz GER.
- MPF 264 **Comparison of the Crystallins from Normal and Cataractous Human Lenses;** *S., He; S., Pan; K., Wu; R., Orlando; CCRC, UGA, 220 Riverbend Rd. Athens, GA, 30602, USA; Zhongshan Ophthalmic Center, Guangzhou, China.
- MPF 265 **Identification of Modified Human Water Insoluble Lens Crystallins by MS;** *Lund, Anders L.; Smith, Jean B.; Smith, David L.; University of Nebraska-Lincoln, Lincoln, Nebraska.
- MPF 266 **Problems and Solutions in Sequencing a Mussel Foot Protein from *M. edulis*;** *Papov, Vladimir; Biemann, Klaus; Massachusetts Institute of Technology, Cambridge MA.
- MPF 267 **Mass Spectrometry of Marine Biomolecules;** *Ross, Mark; Waite, Herb; Taylor, Steven; Naval Research Laboratory, Washington, DC; University of Delaware, Newark, DE.
- MPF 268 **Structure elucidation of the sex-differentiation protein in Crustacea by MS;** Martin, Gilbert; Sorokine, Odile; Moniatte, Marc; *Van Dorsselaer, Alain; Laboratoire de Spectrométrie de Masse BioOrganique-Strasbourg (France); Laboratoire de Biologie Animale-Poitiers (France).
- MPF 269 **Sequence Characterization of a Spider Silk Protein by Electrospray MS / MS;** *Yeung, Bernice; Vouros, Paul; **Mello, Charlene M.; Kaplan, David L.; Chemistry Dept. & Barnett Inst., Northeastern University, Boston, MA 02115; Biotechnology Division., US Army RD & E Center, Natick, MA 01760.
- MPF 270 **Processing of avian sarcoma and leukemia virus precursor polyprotein;** *Papayannopoulos, Ioannis A.; Pepinsky, R. Blake; Chow, E. Pingchang; **Vogt, Volker M.; Biogen Inc., 14 Cambridge Center, Cambridge, MA 02142; Section of Biochemistry, Cornell University, Ithaca, NY 14853.
- MPF 271 **PHOSPHORYLATION SITE IDENTIFICATION BY LC / MS / MS WITH AN ION TRAP MS;** *Gillece-Castro, Beth; Arnott, David; Bier, Mark; Land, Adrian; Stults, John; Genentech, Inc., South San Francisco.
- MPF 272 **Radiation Induced DNA-Protein Crosslinking in Histone Proteins by ESI-MS;** *Weir Lipton, Mary S.; Fuciarrelli, Alfred F.; Springer, David L.; Edmonds, Charles G.; Pacific Northwest Laboratory.
- MPF 273 **Electrospray Ionization Mass Spectra of Recombinant Hirudin Byproducts;** *Lango, Jozsef; **Roboz, John; Salat, Janos; Yu, Qitao; Barta, Istvan; Ott, Istvan; Ambrus, Gabor; Simay, Antal; Institute for Drug Research, Budapest, Hungary; Mount Sinai School of Medicine, New York, NY.
- MPF 274 **Mapping of Brain Proteins Using MALDI / TOF-MS Combined with HPLC;** *Ingendoh, Arnd; Seta, Kazuo; Kanai, Michiko; Nakayama, Hiroshi; Uchida, Kazuhisa; **Isobe, Toshiaki; Okuyama, Tsuneo; Finnigan MAT Instruments Inc., Hatsudai, Shibuya-ku, Tokyo 151, Japan; Tokyo Metropolitan University, Biochemistry, Tokyo 192-03, Japan.
- MPF 275 **Mass Determination of Large Proteins Exceeding 200 kDa by MALDI / TOF-MS;** *Ingendoh, Arnd; Seta, Kazuo; Kanai, Michiko; Yamakawa, Yoshio; Omori-Satoh, Tamotsu; **Isobe, Toshiaki; Okuyama, Tsuneo; Finnigan MAT Instruments Inc., Hatsudai, Shibuya-ku, Tokyo 151, Japan; Tokyo Metropolitan University, Biochemistry, Tokyo 192-03, Japan.
- MPF 276 **CALICHEAMICIN DERIVATIVES CONJUGATED to MONOCLONAL ANTIBODIES (MW ~ 150 kDa);** *Siegel, Marshall; Tabei, Keiko; Berkenkamp, Stefan; **Hillenkamp, Franz; Kunz, Arthur; American Cyanamid; University of Munster.
- MPF 277 **CHARACTERIZATION of FILAMENTOUS HEMAGGLUTININ (MW 230 kDa);** *Siegel, Marshall; Tabei, Keiko;

- Berkenkamp, Stefan; **Hillenkamp, Franz; Liu, Dai-Fang; American Cyanamid; University of Munster.
- MPF 278 **Observation of holoprotein molecular ions of several ferredoxins by ESI-MS; Ptilot, Yves; *Forest, Eric; Meyer, Jacques; Moulis, Jean-Marc; Institut de Biologie Structurale (CEA-CNRS), Grenoble; Département de Biologie Moléculaire et Structurale (CEA), Grenoble.**
- MPF 279 **PROTEOLYTIC PEPTIDES OF RHODOPSIN ANALYZED BY MALDI-TOF; *Barnidge, D. R.; Dratz, E. A.; Sunner, J.; Jesaitis, A. J.; Montana State University, Bozeman.**
- MPF 280 **Analysis of Hydrophobic Peptides and Proteins using ESI- and APCI-MS; *Pel-lascio, Bernhard; Schlunegger, Urs P.; Schaller, Johann; Kaesermann, Donald; Department of Organic Chemistry, Berne, Switzerland; Department of Biochemistry, Berne, Switzerland.**
- MPF 281 **Heregulin / Epidermal Growth Factor Chimeras: A Structural Study; *Rosnack, Kenneth; Guarino, Bradley; Singleton, David; Barbacci, Elsa; Moyer, James; Andrews, Glenn; Stroh, Justin; Pfizer Inc, Central Research, Groton CT 06340; Pfizer Inc, Central Research, Groton CT 06340.**
- MPF 282 **LC-MS peptide map of hirudin by using the unspecific protease thermolysin; *Zilg, Harald A.; **Schultz, Birgit; Research laboratories of Behringwerke AG, Marburg, Germany; FH Ostfriesland, Dept. of Biotechnology, Emden, Germany.**
- MPF 283 **Advances in Peptide Mapping by MALDI-TOF-MS; *Vorm, Ole; **Roepstorff, Peter; Mann, Matthias; Houthaeve, Tony; European Molecular Biology Laboratory (EMBL); Dept. Molecular Biology, Odense University.**
- MPF 284 **Use of ESMS for the study of the mechanism of resistance to beta-lactams; *Burlet-Schiltz, Odile; Saves, Isabelle; Samama, Jean-Pierre; Masson, Jean-Michel; Prom, Jean-Claude; Laboratoire de Pharmacologie et Toxicologie Fondamentales, CNRS, Toulouse.**
- MPF 285 **Analysis of Bovine Insulin (SBI) and Reduced SBI in Glucose Film by PDMS; *Song, Siqing; Cockrill, Steve; Macfarlane, Ronald, D.; Texas A & M University, College Station.**
- MPF 286 **Molecular Recognition in Drug Discovery; *Bell, David; West, Andrew; SmithKline Beecham Pharmaceuticals.**
- MPF 287 **ESI-MS / MS for the Identification of Modifications in Intact Proteins; Busman, M.; Wilcox, M. D.; McIntire, W. E.; Hamm, H. E.; Hildebrandt, J. D.; *Schey, K. L.; Medical University of South Carolina, Charleston, SC; University of Illinois, Chicago.**
- MPF 288 **Mass Spectrometric Analysis of Recombinant Stromelysin and Collagenase; *Bauer, M.D.; Sun, Y.; Anastasio, M.B.; Snider, C.E.; The Procter and Gamble Company.**
- MPF 289 **Characterization of Recombinant NMDA Receptor Regions with ESIMS; *Eckart, Klaus; Koepke, Andreas K. E.; Spiess, Joachim; Department of Molecular Neuroendocrinology, MPI f. Experimental Medicine.**
- MPF 290 **Enhanced Nucleophilicity of the N-terminal Proline in a Protease; *Yu, Zhonghua; Craik, Charles; **Jones, Patrick; Burlingame, Alma; Department of Chemistry, Univ of the Pacific, Stockton, CA; Dept of Pharmaceutical Chemistry, Univ of California, San Francisco, CA.**
- MPF 291 **SEQUENCE AND Ca²⁺ + BINDING PROPERTIES OF FROG (*Rana tigrinka*) PARVALBUMIN; *Hu, Peifeng; Buckel, Scott; Whitton, Margie; Loo, Joseph A.; Parke-Davis Pharm. Res., Div. Warner-Lambert Co., Ann Arbor, MI 48105.**
- MPF 292 **Determination of the Sites of Non-Labile HNE-Adduction to Proteins; *Bolgar, Mark S.; Gaskell, Simon J.; The Michael Barber Center for Mass Spectrometry, Manchester, U.K.**
- MPF 293 **Protease-catalyzed Incorporation of 18O into Protein Fragments; Schnolzer, Martina; Jedrzejewski, Paul; **Lehmann, Wolf; Dept. Cell Biology, German Cancer Research Center; Dept. Central Spectroscopy, German Cancer Research Center.**
- MPF 294 **Methodology to Identify Proteins using LC-Ion Trap Mass Spectrometry; *Yates, John; Eng, Jimmy; Schieltz, David; Link, Andrew; University of Washington.**
- MPF 295 **Cross linking of native protein complexes by organic mustards; *Hathout, Yetrib; Fenselau, Catherine; University of Maryland Baltimore County.**
- 8:15 **TUESDAY ORALS**
- 9:05-9:30 **PLENARY LECTURE: Dr. Don H. Catlin, Director, UCLA Olympic Analytical Laboratory**
- Break**

Morning **Mass Spectrometry in Pharmacology & Toxicology, organized by Lester Taylor**

- TOA 09:30 **Applications of MS / MS to the Study of S-Linked Conjugates of Isocyanates;** *Davis, Margaret R.; Baillie, Thomas A.; Dept. of Med. Chem., University of Washington, Seattle, WA.
- TOA 10:10 **Strategies for Analyses of Drug Metabolite Mixtures by CE-MS and CE-MS / MS;** *Naylor, Stephen; Benson, Linda M.; Tomlinson, Andy J.; Mayo Clinic.
- TOA 10:30 **Probing the Regioselectivity of Gas Phase Alkylation of Biomolecules;** *O'Hair, Richard A.J.; Freitas, Michael A.; Gronert, Scott; Schmidt, Joseph A. R.; Williams, Todd D.; Department of Chemistry, Kansas State University.
- 10:50 **Break**
- TOA 11:10 **Determination of α -Agonists in Bovine Retina Using LC-APCI / MS and MS / MS;** *Doerge, Daniel R.; Bajic, Steve; Churchwell, Mona I.; National Center for Toxicological Research, Jefferson, AR 72079, USA.
- TOA 11:30 **The Use of GC-MS Techniques to Evaluate Biological Lipid Peroxidation;** *Mathews, W. Rodney; Guido, David; McKenna, Rosemary; Laskey, Rachel; The Upjohn Co., Kalamazoo.
- TOA 11:50 **Macrolide Antibiotic Residues in Distiller's Grain and Milk by ESI LC / MS;** *Flurer, Rick; Tomlinson, John; Satzger, Duane; U.S. FDA, National Forensic Chemistry Center, Cincinnati OH.
- TOA 12:10 **Isoprostane Families Following Free Radical Oxidation of Arachidonic Acid;** *Waugh, Russell J.; Murphy, Robert C.; National Jewish Center, 1400 Jackson St., Denver, CO 80206.

AFTERNOON

- TOA 04:00 **Quantitation of Phosphatidylinositol Phosphates by ESIMS;** *Clay, Keith; MacMillan, Denise; Nat'l Jewish Center for Immunology and Resp. Med. Denver, CO.
- TOA 04:20 **Beclomethasone Dipropionate and Metabolites in Plasma via HPLC-APCI / MS / MS;** *Bryant, Matthew S.; Korf-macher, Walter A.; Nardo, Cymbelene L.; Lapiguera, Amelia P.; Lin, Chin-Chung; **Langevin, Carolyn N.; Oglesby, Thomas D.; Schering-Plough Research Institute, Kenilworth, NJ.
- TOA 04:40 **Column-switching sample preparation for quantitative analysis by LC-MS;**

*Hopfgartner, Gerard; Zell, Manfred; Husser, Christophe; Lausecker, Berthold; Hoffmann-La Roche, Department of Drug Metabolism and Kinetics.

- TOA 05:00 **Direct Measurement of Steroid Glucuronides and Sulfates with HPLC / MS;** Sanaullah; *Bowers, Larry; Indiana University Medical Center, Indianapolis, IN.

Morning **Mass Spectrometry in Environmental Research, organized by Susan Richardson**

- TOB 09:30 **EPA: New Directions in Research and the New Expanding Grants Program;** *Huggett, Robert J.; U.S. EPA, Office of Research and Development, Washington, D.C. 20460.
- TOB 10:10 **Haloacetic Acid Drinking Water Disinfection By-Products;** *Budde, William L.; Munch, Jean W.; Kryak, David D.; Behymer, Thomas D.; U. S. Environmental Protection Agency, Cincinnati, OH 45268.
- TOB 10:30 **Investigating Oxidation Reactions in Environmental Systems;** *Charles, M. Judith; Feinberg, Thomas N.; Richardson, Susan; Dept. Env. Sci. & Eng., Univ. of North Carolina at Chapel Hill.
- 10:50 **Break**
- TOB 11:10 **High Speed Analysis of TTHM Content in Drinking Water using MIMS;** *Bauer, Scott; Bauer, Jan; MIMS Technology Incorporated, Palm Bay, FL.
- TOB 11:30 **Chemistry and Toxicology of Poultry Chiller Water;** *Haddon, William F.; Binder, R.G.; Harden, Leslie A.; Wong, R.Y.; Stevens, K.L.; Western Regional Research Center, USDA, Albany, CA 94710.
- TOB 11:50 **Measurement of Verrucarol, a Product of Satratoxin, in Urine by APCI-MS / MS;** *Schurz, Helen; Hill, Robert; CDC, Toxicology Branch, 4770 Buford Hwy, NE, MS F17, Atlanta, GA 30341.
- TOB 12:10 **HPLC / MS & HPLC / MS / MS Analysis of Explosives in Environmental Samples;** Gates, Paul M.; *Furlong, Edward T.; Lindley, Chris E.; Burkhardt, Mark R.; National Water Quality Laboratory, U.S. Geological Survey, Arvada, CO.

AFTERNOON

- TOB 04:00 **MS / MS CID FRAGMENTATION PROCESSES IN SOME PESTICIDES;** *Yinon, Jehuda; Weizmann Institute of Science, Rehovot, Israel.
- TOB 04:20 **Quantification of Non-Persistent Pesticides in Human Serum;** *Barr, John R.;

- Patterson, Donald G.; Jr.; Maggio, Vincent L.; McClure, P. Cheryl; Turner, Wayman E.; Newman, Carolyn M.; Needham, Larry L.; Centers for Disease Control.
- TOB 04:40 **ESI MS / MS Determination of a New Cationic Surfactant in River Water;** *Mertens, Thomas R.; Dunphy, Jocelyn C.; Kershner, Karen M.; Morris, III, Samuel J.; The Procter & Gamble Company, Cincinnati, OH.
- TOB 05:00 **Advantages and Applications of Mass Peak Profiles Plotted from SIR Data;** *Grange, Andrew H.; Donnelly, Joseph R.; **Sovocool, G. Wayne; Brumley, William C.; Lockheed Environmental Systems and Technologies Company.

Morning **Chemistry of Multiply-Charged Ions, organized by Fred McLafferty**

- TOC 09:30 **Multiply charged Fullerene Initiates Polymerization of Allene and Propyne;** *Javahery, Gholamreza; Baranov, Vladimir I.; Hopkinson, Allen C.; Bohme, Diethard K.; Chemistry Dept., York University, Ontario, Canada M3J 1P3; Sciex, Thornhill, Ontario, Canada L3T 1P2.
- TOC 09:50 **Protein Desalting via Gas-Phase Ion-Molecule Chemistry;** *Pope, Marshall; Hofstadler, Steven; Dejsupa, Chadin; Dearden, David; Brigham Young University, Provo, Utah.
- TOC 10:10 **Importance of Charge-Separation Reactions in ESI / MS-MS;** *Adams, Jeanette; Strobel, Fred; Reiter, Alex; Department of Chemistry, Emory University.
- TOC 10:30 **The Correlation of Fragmentation and Structure of a Protein;** *Wu, Qinyuan; Van Orden, Steven; Cheng, Xueheng; Bakhtiar, Ray; Smith, Richard D.; Chem Dept & Env Mol Sci Lab, Pacific Northwest Lab, Richland, WA 99352.
- 10:50 **Break**
- TOC 11:10 **Quadrupole Ion Trap Study of Ion-Ion Chemistry of Multiply-Charged Ions;** *Herron, William, J.; Goeringer, Douglas, E.; McLuckey, Scott, A.; Oak Ridge National Laboratory, Oak Ridge, TN.
- TOC 11:30 **Isomeric Structures for Ubiquitin Ions Produced by Electrospray FTMS;** *Cassady, Carolyn J.; Ewing, Nigel; Miami University.
- TOC 11:50 **Electrostatic Forces in Multiply Protonated Gas-Phase Ions;** *Williams, Evan R.; Gross, Deborah S.; Schnier, Paul S.; Rodriguez-Cruz, Sandra; Fagerquist,

Clifton K.; University of California, Berkeley.

AFTERNOON

- TOC 04:00 **Tertiary Structure of Protein Ions in the Gas-Phase;** *Fagerquist, Clifton; Schnier, Paul; Gross, Deborah; Rodriguez-Cruz, Sandra; Williams, Evan; University of California, Berkeley, CA 94720.
- TOC 04:20 **Deprotonation Reactions of Small Peptide Ions Produced by Electrospray;** *Carr, Scott R.; Cassady, Carolyn J.; Miami University.
- TOC 04:40 **Characterization of Carbonic Anhydrase-Inhibitor Noncovalent Complexes;** *Cheng, Xueheng; Chen, Ruidan; Bruce, James E.; Schwartz, Brenda L.; Anderson, Gordon A.; Hofstadler, Steven A.; Gale, David C.; Smith, Richard D.; Pacific Northwest Laboratory, Richland, Washington 99352.
- TOC 05:00 **Compounds That Elude FAB Analysis: It All Begins in Solution!;** Noon, Kate; *Allison, John; Michigan State University, East Lansing, MI.

Morning **Laser Desorption Ionization - Applications, organized by Robert Brown**

- TOD 09:30 **MALDI-MS in the Infrared: A critical evaluation;** *Hillenkamp, Franz; Karas, Michael; Berkenkamp, Stefan; Inst. f. Med. Physics and Biophysics, University of Muenster, Germany.
- TOD 10:10 **Detection Limits for MALDI of Polypeptides by FTMS;** *McIver, Jr., Robert T.; Li, Yunzhi; University of California, Irvine, CA 92717-2025.
- TOD 10:30 **Sequencing Electroblooded Proteins by Tandem Mass Spectrometry;** *Fabris, Dan; Vestling, Martha M.; **Cordero, Marcela M.; Doroshenko, Vladimir M.; Cotter, Robert J.; Fenselau, Catherine; University of Maryland Baltimore County, Baltimore, MD 21228.
- 10:50 **Break**
- TOD 11:10 **MALDI AND PSD CHARACTERIZATION OF RELEASED CARBOHYDRATES FROM GLYCOPROTEINS;** *Rouse, Jason C.; Vath, James E.; Scoble, Hubert A.; Genetics Institute, Inc., One Burt Road, Andover, MA 01810.
- TOD 11:30 **MASS SPECTROMETRY IN PROTEIN AND GLYCOPROTEIN STRUCTURE ELUCIDATION;** Morris, Howard R.; Dell, Anne; Panico, Maria; *McDowell, Roy A.; Imperial College, Department of Biochemistry, London. SW7 2AY UK.

- TOD 11:50 **Nucleotide analogs increase the stability of DNA for MALDI-MS analysis;** *Schneider, Klaus; Chait, Brian T.; The Rockefeller University.
- TOD 12:10 **Molecular Diagnostics Via Mass Spectrometry of PCR-Amplified DNA Products;** *Buchanan, Michelle V.; Doktycz, Mitchell J.; Hurst, Gregory B.; McLuckey, Scott A.; Habibi-Goudarzi, S.; Oak Ridge National Laboratory, Oak Ridge, TN.
- AFTERNOON**
- TOD 04:00 **Analysis of DNA and Modified Proteins with Resolution Improvements in MALDI;** *COLBY, STEVEN; ARNOLD, RANDY; CHRISTIAN, NOAH; HOUSTON, CHRIS; REILLY, JAMES; INDIANA UNIVERSITY, BLOOMINGTON IN.
- TOD 04:20 **Applications of High Resolution MALDI TOF to Oligonucleotide Problems;** *Juhasz, Peter; Vestal, Marvin; Martin, Stephen; Takach, Ed; Haff, Lawrence; Roskey, Mark; Smirnoff, Igor; PerSeptive Biosystems, Inc.
- TOD 04:40 **Applications of MALDI / TOF in Polymer Chemistry;** *Danis, Paul O.; Huby, Francois; Rohm and Haas Research Laboratories.
- TOD 05:00 **Polymer Characterization: A Comparison of MALDI vs Direct Laser Desorption;** *Weil, David A.; Jacoby, Clifton B.; 3M Company, St. Paul, MN 55144-1000.

TOE 04:00 MS TUTORIALS - afternoon only

Basics of MALDI on a TOF Mass Spectrometer; Cotter, Robert; Johns Hopkins University.

Basics of Electrospray on an Ion Trap Analyzer; Glish, Gary; University of North Carolina.

Morning Mechanisms of Ion-Molecule Reactions, organized by Joe Grabowski

- TOF 09:30 **Reactions of Borohydride Cations with Organic Molecules;** *DePuy, Charles; Damrauer, Robert; Hankin, Joseph; Department of Chem. and Biochem., Univ. of Colorado, Boulder CO 80309-0215.

- TOF 10:10 **A Study of the SN2 Reaction of Cl- with i-C3H7Br at Atmospheric Pressure;** *Sahlstrom, K. E.; Knighton, W. B.; Grimsrud, E. P.; Department of Chemistry, Montana State University, Bozeman, Montana.

- TOF 10:30 **Chemical Reactions vs Collision-Induced Dissociation to Cleave Amide Bonds;** *Williams, Tracie L.; Stephenson, James L.; Yost, Richard A.; University of Florida, Gainesville.

10:50 **Break**

- TOF 11:10 **Neutral Products From Ion-Molecule Reactions: F- + 5-Chloro-1,3-Pentadiene;** Baschky, Michael; *Kass, Steven; Kass, Steven; University of Minnesota, Minneapolis, MN 55455.

- TOF 11:30 **Ion-Molecule Reactions of Trimethylenemethane Radical Cation;** *Chou, Phillip; Painter, Sherry; Blackstock, Silas; Kenttamaa, Hilka; Purdue University, West Lafayette, IN; Vanderbilt University, Nashville, TN.

- TOF 11:50 **Reactions of Small Carbon Clusters with Nitrogen Containing Compounds;** *Dunbar, Robert C.; Pozniak, Boguslav P.; Case Western Reserve University.

- TOF 12:10 **Ion-Molecule Reactions of 18-Crown-6 With its Fragment Ions;** Shen, Nanzhu; *Dejsupa, Chadin; Pope, Marshall; Darden, David; Brigham Young University, Provo, Utah.

AFTERNOON

- TOF 04:00 **Reactions and Rearrangements of TMS Dimer Radical Cation;** *Peschke, Michael; Mckee, Michael; Illies, Andreas; Auburn University, Auburn.

- TOF 04:20 **Ion Molecule Reactions of Organophosphorus Compounds;** *Wensing, Michael W.; Snyder, A. Peter; Harden, Charles S.; ERDEC, Aberdeen Proving Ground.

- TOF 04:40 **State-selected reactions between N2 + molecular ions and atoms and molecules;** *de Gouw, Joost A.; Ding, Li N.; Kato, Shuji; Bierbaum, Veronica M.; Leone, Stephen R.; Joint Institute for Laboratory Astrophysics, University of Colorado.

- TOF 05:00 **Symmetry Induced Kinetic Isotope Effects in the Formation of Ar•CO2 + ;** *Gellene, Gregory; Yoo, Ryong; Department of Chemistry, Texas Tech University, Lubbock TX 79409-1061.

TUESDAY POSTERS

Ion Activation

- TPA 001 **Structural Aspects of Metal-Oligonucleotide Binding Studied by ESI-CID-MS;** *Cheng, Xueheng; Wu, Qinyuan; Gao, Quanyin; Hofstadler, Steven A.;

- Smith, Richard D.; Pacific Northwest Laboratory.
- TPA 002 **Gas Phase Chemistry of MX + Ions (X = H, Na, Cu) from Glycine and Arginine;** *Beranova, Sarka; Cerda, Blas; Wesdemiotis, Chrys; Department of Chemistry, The University of Akron, Akron, OH 44325-3601 USA.
- TPA 003 **ESI MS-MS Using B/E vs MIKES Scans;** *Sullards, Cameron; Adams, Jeanette; Department of Chemistry, Emory University, Atlanta GA 30322.
- TPA 004 **Electrospray MS of Multiple Alkali Ion Complexes of Proteins and Peptides;** Wang, Jianyao; Ke, Fu; Guevremont, Roger; *Siu, K. W. Michael; Inst. Envir. Res. and Tech., NRC, Ottawa, Canada K1A 0R6.
- TPA 005 **Collision-induced dissociation energy thresholds of protonated peptides;** *Klassen, John S.; Anderson, Stephen A.; Blades, Arthur T.; Kobarle, Paul; Department of Chemistry, University of Alberta, Edmonton, AB, Canada.
- TPA 006 **INFLUENCE OF 2ND STRUCTURE ON PEPTIDE ION DISSOCIATION IN A TANDEM**
- TOFMS; *Gimon-Kinsel, Mary; Russell, David; Laboratory for Biological Mass Spectrometry, Texas A & M University.
- TPA 007 **Intra-ionic Acid / Base Interactions in the CID of Protonated Peptides;** *Cox, Kathleen A.; Whiting, Andrew; Gaskell, Simon J.; The Michael Barber Centre for Mass Spectrometry; UMIST; Manchester UK.
- TPA 008 **A Multistep Pathway Leading to Peptide wⁿ Ions Confirmed by MS3 and MS4;** *Ballard, Kevin; Orkiszewski, Ralph; **Gaskell, Simon; Center for Experimental Therapeutics, Baylor College of Medicine, Houston; University of Manchester Institute for Science and Technology, Manchester.
- TPA 009 **WHY ARE B IONS STABLE SPECIES IN PEPTIDE SPECTRA?;** *Yalcin, Talat; Harrison, Alex. G.; Department of Chemistry, Univ. of Toronto, Toronto.
- TPA 010 **Gas Phase Reactions of Protonated Biologically Active Peptides;** *MOSELY, JACKIE A; DERRICK, PETER J; GALLAGHER, RICHARD T; COOPER, HELEN J; CRAIG, ANTHONY G; DEPARTMENT OF CHEMISTRY, UNIVERSITY OF WARWICK, COVENTRY, CV4 7AL, UK.; SALK INSTITUTE OF BIOLOGICAL SCIENCES, POBOX 85800, SAN DIEGO, CA 92186.
- TPA 011 **Correlation of Energy Losses from CID with Observed Peptide Fragments;** *Vachet, Richard W.; Winders, Andrew; Glish, Gary L.; University of North Carolina, Chapel Hill.
- TPA 012 **Peptide Sequencing Using a Hybrid Magnetic Sector oa-TOF Mass Spectrometer;** Sun, Y, Bauer, M. D., Lacey, M. P., Keough, T.; Protor & Gamble, Cincinnati, OH.
- TPA 013 **Peptide Fragment Mass Spectra: Comparison of PSD and CID spectra;** *Hines, Wade; Peltier, John; Hsieh, Frank; Martin, Steve; PerSeptive Biosystems.
- TPA 014 **CAD and Photodissociation of Multiply Charged Ions;** *Watson, Clifford; Yang, Yarjing; Nawrocki, Joe; Eyler, John; University of Florida, Gainesville, FL.
- TPA 015 **SID of Multiply-Charged and N-Terminal Fixed-Charge Derivatized Peptides;** *Dongre, Ashok; Somogyi, Arpad; Wysocki, Vicki; Virginia Commonwealth University.
- TPA 016 **Electrospray Mass Spectra of Simple Aliphatic Diamines and Methiodides;** *Zhang, X. Kate; **Fales, Henry M.; National Heart, Lung, and Blood Institute, Bethesda, MD.
- TPA 017 **Chemistry of Si(C₅H₅) + and H₂Si(C₅H₅) + ;** *Gonnella, Tom; Kardash, Dawn; Jacobson, Denley; North Dakota State University.
- TPA 018 **Thermal Radiation Induced Dissociation of Tetraethylsilane Cation;** *Lin, Chuan-Yuan; Dunbar, Robert C.; Case Western Reserve University.
- TPA 019 **Some More C₃H₆O₂ Distonic Radical Cations;** *An, Yan; Holmes, John L.; Department of Chemistry, University of Ottawa.
- TPA 020 **The Fragmentation of Geometric Isomer, Ionized Maleic and Fumaric Acids;** *Chen, Hongwen; Holmes, John L.; Department of Chemistry, University of Ottawa.
- TPA 021 **Characterization of small, oxygen-rich ions;** *Aubry, Christiane; Holmes, John L.; Chemistry Department, University of Ottawa, Ottawa, Ontario, Canada.
- TPA 022 **The Identification of C₃H₆O + . from 2-Methoxyethanol;** *Polce, Michael J.; Wesdemiotis, Chrys; Department of Chemistry, The University of Akron, Akron, OH 44325-3601 USA.
- TPA 023 **N-substituted Benzisothiazolinons: Oxygen Rearrangement on Electron Impact;** *Lango, Jozsef; Institute for Drug Research, Ltd.

- TPA 024 **Unimolecular Dissociation of Acetophenone by Thermal Radiation;** Sena, Marcelo; *Riveros, Josi M.; Institute of Chemistry, University of São Paulo.
- TPA 025 **Hyperthermal Surface Ionization of Organic Molecules: Alkyl Alcohols;** *Kishi, Hiroshi; **Fujii, Toshihiro; Oyama National College of Technology, Oyama 323, Tochigi; National Institute for Environmental Studies, Tsukuba, Ibaraki 305.
- TPA 026 **The Unimolecular Dissociation of Energy Selected 2, 5-Dihydrofuran;** *Teklehaimanot, Bibi; Meisels, Gerry; Department of Chemistry, University of South Florida.
- TPA 027 **Influence of Substituents on Propene Loss from Aryl n-Propyl Ether Ions;** *Matimba, Henri E. K.; Ingemann, Steen; Nibbering, Nico M. M.; Institute of Mass Spectrometry, University of Amsterdam.
- TPA 028 **Angle / Energy-Resolved CID of CS₂⁺ ions at 8-35 eV Collision Energy;** Shukla, Anil K.; *Tosh, R.E.; Futrell, Jean H.; University of Delaware, Newark DE.
- TPA 029 **Tandem crossed beam collision induced dissociation of CO₂⁺;** *Chawla, Rahul; Krishnamurthy, M.; Shukla, A. K.; Futrell, J. H.; University of Delaware, Newark, Delaware.
- TPA 030 **Investigation of Kinetic Trans Effect in Bis(platinum) Complexes by SID;** *Schaaff, Thomas; Qu, Yun; Farrell, Nicholas; Wysocki, Vicki; Virginia Commonwealth University, Richmond, VA, USA.
- TPA 031 **NI FAB and DCI-MS of Sulfonylurea Herbicides; CAD Spectra of (M-H)⁺ Ions;** *Winnik, Witold; Betowski, Leon; Brumley, William; U.S. EPA, Las Vegas, NV.
- TPA 032 **DEP / CI-MS / MS Characterization of Sulfonylurea Herbicides;** *Johnson, Jodie V.; Yost, Richard A.; Chemistry Dept., University of Florida, Gainesville, FL.
- TPA 033 **Measurement of phosphonate proton affinities by using the kinetic method;** **Aline, Leroy; Frangoise, Fournier; Jacquy, Dissard; Isabelle, Daoust-Maleval; Andri, Tambuti; *Jean-Claude, Tabet; LCSOB (EP 103-CNRS)-UPMC, Paris, FRANCE; LCRA, Centre du Bouchet, Vert-le-Petit, FRANCE.
- TPA 034 **CID Studies of Inorganic Species Released During Biomass Combustion;** *Dayton, David; Wang, Dingneng; National Renewable Energy Laboratory, Golden, Colorado.
- TPA 035 **Photodissociation of Electrosprayed Ions in a Quadrupole Ion Trap;** *Boue, Stephen M.; Stephenson, James L.; Yost, Richard A.; University of Florida, Gainesville FL.
- TPA 036 **Pulsed Pressure Quadrupole Ion Trap for Tandem MS of Peptides;** *Doroshenko, Vladimir M.; Cotter, Robert J.; The Johns Hopkins University School of Medicine.
- TPA 037 **Thermal Activation of Stored Ions in a Quadrupole Ion Trap;** *Herron, William J.; Goeringer, Douglas E.; McLuckey, Scott A.; Oak Ridge National Laboratory, Oak Ridge, TN.
- TPA 038 **The Analytical Utility of Photodissociation in Tandem Mass Spectrometry;** *Beussman, Douglas J.; Erickson, Tina A.; Enke, Christie G.; Dept. of Chemistry, University of New Mexico, Albuquerque, NM 87131; Dept. of Chemistry, Michigan State University, East Lansing, MI 48824.
- TPA 039 **SMIKES: A New Scan to Determine the Origin of Artefact Peaks in MIKE Scans;** *Mouget, Yves; Bertrand, Michel J.; University of Montreal, Montreal, Canada.
- TPA 040 **Mapping Metastable Decays in a TOF MS with a Single-stage Ion Mirror;** *Brinkmalm, Gunnar; Håkansson, Per; Sundqvist, Bo U.R.; **Barofsky, Douglas F.; Div. Ion Phys., Dept. Rad. Sci., Uppsala Univ., Uppsala, Sweden; Dept. Ag. Chem., Oregon State Univ., Corvallis, OR.
- TPA 041 **Tandem Mass Spectrometry Utilizing the Advantages of Both MALDI and FTMS;** *Castoro, John; Shew, Sandy; Stout, Howard; Winger, Brian; Campana, Joseph; Extrel FTMS, Madison.
- TPA 042 **MS / MS Studies Using a Hybrid Magnetic Sector oa-TOF Mass Spectrometer;** *Keough, T.; Lacey, M.P.; Bauer, M.D.; Sun, Y.; The Procter and Gamble Company.
- TPA 043 **Surface Induced Dissociation of Biomolecules and Polymers by MALDI-FTMS;** *Pastor, Salvador J.; Yao, Jie; Wilkins, Charles L.; University of California-Riverside, Riverside, CA 92521.
- TPA 044 **Identifying Possible Sources of Ion Neutralization at SAM Surfaces;** *Kane, Thomas; Angelico, Vincent; Nair, Hari; Somogyi, Arpad; Wysocki, Vicki; Virginia Commonwealth University.
- TPA 045 **Hydrogen-addition Reactivity of Ions on Odd vs Even Chain Alkanethiol**

- SAMS; *Franklin, Rebecca; Zhong, Wen-quing; Somogyi, Arpad; Wysocki, Vicki; Virginia Commonwealth University.
- TPA 046 **Derivatization Reactions for FAB, LSIMS, and Electrospray Ionization;** *Carlson, Rich; Busch, Kenneth L.; Georgia Institute of Technology, Atlanta, GA.
- TPA 047 **EFFECT OF A MATRIX ON LSIMS-INDUCED FRAGMENTATION OF PHOSPHATE ESTER BOND;** *Dass, Chhabil; The University of Memphis, Memphis, TN 38152, USA.
- TPA 048 **Parent Resolution in FFR1 MS / MS: Revelations from Ion Intensity Plots;** *Ballard, Kevin; **Vachet, Richard; Orkiszewski, Ralph; Glish, Gary; Vrbanac, James; Gaskell, Simon; Center for Experimental Therapeutics, Baylor College of Medicine, Houston; Department of Chemistry, University of North Carolina, Chapel Hill.

Separations / MS Techniques

- TPB 049 **Identification of fullerenes in natural flames by APCI / LCMS;** *Taghizadeh, Koli; Nauman, David; Lafleur, Arthur; Howard, Jack; Massachusetts Institute of Technology.
- TPB 050 **Effect of Mobile Phase Buffers on Sensitivity in Negative APCI LC / MS;** *Schaefer, William; Dixon, Frank, Jr; SmithKline Beecham, King of Prussia.
- TPB 051 **Optimization of Normal Phase LC-APCI / MS by the Introduction of Ammonia Gas;** *Robke, David; Ackermann, Bradley; Dage, Jeffrey; Barbuch, Robert; Marion Merrell Dow Research Institute, Cincinnati, OH.
- TPB 052 **Analysis Of Selected Pharmaceuticals Using Different API Techniques;** *Goodley, Paul C.; Fischer, Steven; Hewlett-Packard USAD-BAO.
- TPB 053 **Oscillating Capillary Nebulizer Interfacing with Mass Spectrometers;** *Ho, Z. Stacy; Drew, Barry; Browner, Richard; School of Chemistry and Biochemistry, Georgia Tech, Atlanta, GA 30332-0400.
- TPB 054 **EVALUATION AND APPLICATION OF NEGATIVE ION ATTACHMENT LC / MS;** *Norwood, Daniel; Fisher, Dixie; Mullis, James; Glaxo Research Institute Research Triangle Park, NC.
- TPB 055 **ANALYSIS OF CEFTIOFUR AND ITS METABOLITES IN MILK BY LC / API-MS;** Voyksner, Robert; *Keevers, Jeff; Research Triangle Institute, P.O. Box 12194 RTP, NC 27709.
- TPB 056 **Electrospray Liquid Chromatography / Mass Spectrometry of Ginsenosides;** van Breemen, Richard B.; *Huang, Chao-Ran; Rimando, Agnes; Lu, Zhi-Zhen; Fitzloff, John F.; Univ. of Illinois at Chicago, Dept. of Medicinal Chemistry & Pharmacognosy.
- TPB 057 **Electrospray Liquid Chromatography / Mass Spectrometry of Carotenoids;** *van Breemen, Richard B.; Univ. of Illinois at Chicago, Dept. of Medicinal Chemistry & Pharmacognosy.
- TPB 058 **Multi-residue method of α -agonists by immunoaffinity extraction-LC / LC / MS / MS;** *Cai, Jianyi; Henion, Jack; Analytical Toxicology, Cornell University, Ithaca, NY 14850.
- TPB 059 **An LC / MS Method Using Non-volatile Mobile Phases with Ionspray Ionization;** *Mallis, Larry M.; Slayback, John R. B.; Bristol-Myers Squibb, New Brunswick, NJ.
- TPB 060 **A Rapid Universal LC / ESI-MS Method for Profiling Drug Metabolites;** Taylor, Susan; *Starrett, Anne; DiDonato, Gerald; Lee, Michael; Bristol-Myers Squibb Pharmaceutical Research Institute, Princeton.
- TPB 061 **Electrospray LC / MS Profiling in Evolving Pharmaceutical R & D Strategies;** *Kerns, Edward H.; Volk, Kevin J.; Klohr, Steven E.; Rourick, Robyn A.; Thompson, William L.; Whitney, Jeffrey L.; Lee, Mike S.; Bristol-Myers Squibb Pharmaceutical Research Institute, Wallingford.
- TPB 062 **Examination of Chiral Purity by HPLC-MS;** Davidson, Susan; Pullen, Frank; *Richards, Don; Wright, Adrian; Pfizer Central Research, Sandwich, Kent, UK.
- TPB 063 **Quantitative Aspects of HPLC Peak Purity Determination by ESI / MS;** *Bryant, Duncan; SmithKline Beecham, Tonbridge, Kent, United Kingdom.
- TPB 064 **Data Dependent Automated MS / MS Switching Methods for Routine LC / MS / MS;** *Mylchreest, Iain; Campbell, Clay; Wheeler, Kevin; Wakefield, Michael; Finnigan MAT.
- TPB 065 **Electrospray vs. Thermospray LC / MS for Analysis of Small Molecules;** *Creasy, William R.; EAI Corporation, Abingdon, MD.
- TPB 066 **Enhanced Sensitivity LC / MS Using Low Resolution Quadrupole Mass Analysis;** *Dodsworth, David W.; Alexander, Anthony J.; Blackledge, James A.; Bristol-Myers Squibb, Co., Syracuse, NY.

- TPB 067 **Electrospray Interface for Submicroliter LC / MS Analyses;** *Davis, Michael T.; Lee, Terry D.; City of Hope, Duarte, CA.
- TPB 068 **Separation and Analysis of Human Lens Alpha-Crystallins by LC-ESIMS;** *Lin, Peiping; Smith, Jean B.; Smith, David L.; Department of Chemistry, University of Nebraska-Lincoln, Lincoln, NE 68588.
- TPB 069 **Preparative Applications of Microcapillary HPLC for Mass Spectrometry;** *Hackett, Murray; Hendrickson, Ronald C.; Falchetto, Rocco; Walker, Carthene B.; Shabanowitz, Jeffrey; Hunt, Donald F.; Dept. of Chemistry, University of Virginia, Charlottesville.
- TPB 070 **Multi-Dimensional LC-MS and LC-MS / MS for Protein Sequencing and Mapping;** *Hsieh, Frank; Elicone, Chris; Wang, HangQi; Tarr, George; Regnier, Fred; Martin, Stephen; PerSeptive Biosystems, Inc., Cambridge, MA01239.
- TPB 071 **Peptide Sensitivity by LC-ESI / MS as a Function of Column Diameter;** *Ackermann, Bradley; Fields, Steven; Regg, Brian; **Dourdeville, Theodore; Marion Merrell Dow Research Institute, Cincinnati, OH; Waters Chromatography, Milford, MA.
- TPB 072 **ENHANCING API-MS PERFORMANCE THROUGH CHROMATOGRAPHY;** *Voyksner, Robert; Kever, Jeff; Research Triangle Institute, P.O. Box 12194, RTP, NC 27709.
- TPB 073 **Effects of Salts and Trifluoroacetic Acid on Aerosol MALDI Ion Signal;** *Beeson, Michelle D.; Wei, Xiaona; Russell, David H.; Laboratory for Biological Mass Spectrometry, Texas A & M University.
- TPB 074 **Application of LC / IT / reTOF MS to Peptide Mapping and Drug Analysis;** *Qian, Mark G.; Liang, Li; He, Ling; Lubman, David M.; University of Michigan, Ann Arbor, MI.
- TPB 075 **Continuous Flow MALDI MS in an Ion Trap / reTOF Mass Spectrometer;** *Liang, Li; He, Ling; Chien, Benjamin; Luman, David; The University of Michigan, Ann Arbor.
- TPB 076 **Structures of Biopolymers; A Combined MALDI - Ion Chromatography Approach;** von Helden, G.; Wyttenbach, T.; Lee, S.; *Bowers, M.T.; University of California at Santa Barbara.
- TPB 077 **CITP ESI-FTICR for the Study of X-Irradiation Damaged Tetranucleotides;** *Hofstadler, Steven A; Zhao, Zhongxi; Bruce, James E; Smith, Richard D; Budzinski, Ed; Dawidski, Jean; Gobey, Jason; **Box, Harold; Pacific Northwest Laboratory; Roswell Park Cancer Institute.
- TPB 078 **Complex Mixture Analysis by using Liquid Chromatography Coupled with FTMS;** *Winger, Brian; Castoro, John; Extrel FTMS, Madison.
- TPB 079 **MALDI-TOF-MS of Organometallic Species: Comparison to FAB and ESI;** *Grimm, Deborah A.; Baba, Aaron I.; Yongwu, Liang; Simon, Jerald; Schmehl, Russell H.; Tulane University, New Orleans.
- TPB 080 **ATMOSPHERIC PRESSURE CHEMICAL IONIZATION FOR CE / MS;** *Takada, Yasuaki; Sakairi, Minoru; Koizumi, Hideaki; Central Research Laboratory, Hitachi Ltd., Kokubunji, Tokyo 185, Japan.
- TPB 081 **DETERMINATION OF AMINO ACIDS BY ON-LINE CAPILLARY ELECTROPHORESIS - ESI / MS;** *Lu, Wenzhe; Yang, George; Cole, Richard B.; Dept. of Chemistry, University of New Orleans, New Orleans, LA 70148 USA.
- TPB 082 **CE-Ionspray-MS Analyses of Tryptic Peptides using a Benchtop Quadrupole MS;** *Anacleto, Joseph F.; Allen, Mark; SCIEX, Thornhill, Ontario, Canada.
- TPB 083 **CE / ES / MS of Peptides and Proteins Using A New Sheath-flow Probe;** *Banks, J. Fred; Whitehouse, Craig M.; Analytica of Branford, Inc.
- TPB 084 **Analysis of Peptides, and Proteins Using CE / ESI / MS;** *Moini, Mehdi; Cao, Ping; Ray, Kenneth; Holbert, Anthony; Department of Chemistry and Biochemistry, University of Texas at Austin.
- TPB 085 **On-line Characterization of Peroxidation Intermediates of NAD by CE-ESI-MS;** *Zhao, Zhongxi (Zack); Udseth, Harold R.; Smith, Richard D.; Pacific Northwest Laboratory, Richland, WA.
- TPB 086 **Electrospray CZE / MS and LC / MS With An Ion Trap Mass Spectrometer;** *Stacey, Catherine; Schubert, Michael; **Banks, J.Fred; Bruker Analytical Systems Inc, Billerica, MA; Analytica of Branford, Branford, CT.
- TPB 087 **Direct Analysis of Cellular Proteins by Capillary Electrophoresis FTICR-MS;** *Hofstadler, Steven A.; Swanek, Frank D.; Gale, David c.; Zhao, Zhongxi; Bruce, James E.; Ewing, Andrew; Smith, Richard D.; Pacific Northwest Laboratory; Penn State University.
- TPB 088 **CE / ITMS: Achieving Ultra-low Detection Limits;** *Ramsey, Roswitha S.; Goeringer, Doug E.; Van Berkel, Gary J;

- TPB 089 McLuckey, Scott A.; Oak Ridge National Laboratory, Oak Ridge, TN 37831-6365. **A new setup for on-line CE-MS;** *Li, Xuhui; Wu, Jingtao; Lubman, David; University of Michigan.
- TPB 090 **OFF-LINE COUPLING OF CAPIL - LARY ELECTROPHORESIS AND MALDI-TOF MS;** *Walker, Kathleen L.; Chiu, Rick W.; Monnig, Curtis A.; Wilkins, Charles L.; University of California, Riverside.
- TPB 091 **Influence of the Source geometry on the Ion formation in LC / TSP-MS;** *Honing, Maarten; Barcel, Damia; Abian, Joaquin; Gelp, Emilio; **Volmer, Dietrich; Levsen, Karsten; Dept. of Environm. and Neuro-Chemistry, CID/CSIC, Barcelona; Dept. of Anal. Chem., Fraunhofer Institute, Hannover.
- TPB 092 **Determination of Steroids by HPLC / UV-VIS / Particle Beam Mass Spectrometry;** *Mesmer, Mantai; Satzger, R. Duane; Forensic Chemistry Center, U.S.F.D.A, Cincinnati.
- TPB 093 **LC Particle Beam MS with Massive Cluster Impact;** *Wang, T.-C. L.; Cornio, L. J.; Markey, S.P.; National Institute of Mental Health.
- TPB 094 **Particle Beam LC / MS using a Glow Discharge Ionization Source;** *DePalma Jr., Patrick; You, Jianzhang; Marcus, R. Kenneth; Willoughby, Ross C.; Clemson University.
- TPB 095 **LC / MS for Identification of N-Nitrosamines in Cosmetic Raw Materials;** *Billedeau, Stanley M.; Wilkes, Jon G.; Thompson, Harold C.; FDA, NCTR, Jefferson, AR 72079.
- TPB 096 **SFC / MS: Development and Problem Solving;** *Pinkston, J. David; Smith, Claudia A.; Hentschel, Rosemary T.; Bowling, Donald J.; The Procter & Gamble Co., Miami Valley Laboratories, Cincinnati, Ohio.
- TPB 097 **SFC / CIMS of Monomers and Polymer Hydrolysis Products;** *Via, Jim; Luddick, Robert; Doster, Douglas; Morton International.
- TPB 098 **Separation and Identification of meso-substituted tetraphenylporphyrins;** *M. Domingues, M. Rosario; O. S. Marques, M. Graa; Ferrer Correia, A. J.; Dep. of Chemistry, Mass Spec. Lab., University of Aveiro, Portugal.
- TPB 099 **Quantitative Analysis of Absciscic Acid in Plant Tissue Using LC / MS / MS;** *Hogge, Lawrence; Abrams, Suzanne; Abrams, Garth; Bock, Cheryl; Dunstan, David; Olson, Douglas; Shaw, Angela; Plant Biotechnology Institute, National Research Council.
- TPB 100 **Evaluation of GCMS and FABMS for Analysis of Fungicidal DTTT Degradation;** Teesch, Lynn; Thorne, Peter S.; *Subramanian, Periyasamy; Department of Preventive Medicine and Environmental Health.
- TPB 101 **Pentafluorobenzyl Chloroformate as a Derivatization Reagent for NCI / MS;** *Simpson, J.T.; Torok, D.S.; Markey, S.P.; National Institute of Mental Health.
- TPB 102 **Thermal Study of Glycyrrhizic Acid by On-line Thermogravimetry / GC / MS;** *Chung, Henry; Aldridge, John; Dull, Gary; Shu, Chi-Kuen; R. J. Reynolds Tobacco Company, Winston-Salem, NC 27102.
- TPB 103 **Characterization of Aromatized Biomarkers by GC / MS / MS with CI;** *Hsu, Chang Samuel; Dechert, Gary J.; **Schaps, Marlene E.; Hieshima, Glenn B.; Exxon Research & Engineering Co., Annandale, NJ; Exxon Production Research Co., Houston, TX.
- TPB 104 **Structure Elucidation of Trace Components in Pharmaceuticals Using GC / MSn;** *Schachterle, Steve; Varian Chromatography Systems, Walnut Creek, CA.
- TPB 105 **Isotopically Labeled Internal Standards Analysis Using Ion Trap GC / MS / MS;** *Bolton, Barbara A.; Schachterle, Steve; Varian Chromatography Systems, Walnut Creek, CA.
- TPB 106 **Reproducibility Study of GC / MS / MS with an Ion Trap Mass Spectrometer;** *Bolton, Barbara A.; Schachterle, Steve; Varian Chromatography Systems, Walnut Creek, CA.
- TPB 107 **High Speed Method Optimization For Routine GC / MS / MS In An Ion Trap;** Wells, Greg; *Huston, Chuck; Varian Chromatography Systems.
- TPB 108 **Dual Oven Multidimensional Fast GC with Spectral Detection;** *Sasaki, Tania A.; Wilkins, Charles L.; University of California, Riverside, Riverside, CA.
- TPB 109 **High-Speed GC / MS Using a Quadrupole Mass Filter;** *Grimm, Casey; Lloyd, Steven; **Munchausen, Linda; USDA-ARS-SRRC New Orleans, LA; Southeastern Louisiana University, Hammond, LA.
- TPB 110 **HIGH-SPEED GC / MS WITH A FAST DOUBLE-FOCUSSING MASS SPECTROMETER;** Van Ysacker, Peter G.; Brown, Jeff; Phillips, Andy; Janssen, Hans-Gerd; *Leclercq, Piet A.; Eindhoven University of Technology, Eindhoven

- hoven, The Netherlands; Fisons Instruments, VG Analytical, Manchester, England.
- TPB 111 **Fast, Very Fast and Ultra Fast GC-MS in Supersonic Molecular Beams;** *Amirav, Aviv; Dagan, Shai; Tel Aviv University.
- TPB 112 **New Developments in Benchtop Quadrupole API LC / MS Systems;** *Bashall, Anthony D.; MacLean, Matthew; Perkin Elmer, Applied Biosystems Division, Foster City, CA.

Combinatorial Libraries

- TPC 113 **Non-Peptide Libraries: Structure Determination by LC / MS / MS;** *Issakova, Olga; Ma, Nina; Kocis, Petr; Sepetov, Nikolai; Selectide Corporation.
- TPC 114 **Optimization of MALDI Sequencing of Support-Bound Combinatorial Libraries;** Youngquist, R. Scott; Fuentes, Gary R.; Miller, Cathy M.; Ridder, Gregg M.; Lacey, Martin P.; *Keough, Thomas; The Procter and Gamble Company.
- TPC 115 **Characterization of Small Molecules by ESI and APCI;** *McKay, Richard; McEwen, Charles; Larsen, Barbara; E. I. du Pont de Nemours & Company.
- TPC 116 **MS / MS of Thiazolidinones: Applications of MS in Combinatorial Chemistry;** *Fitch, William; Shah, Nikhil; Holmes, Christopher; Look, Gary; Ni, Zhi-Jie; Affymax Research Institute, Santa Clara, CA.
- TPC 117 **Characterization of Complex Chemical Libraries Using LC / MS / MS;** *Nugent, Kerry; Baldwin, Samuel W.; Land, Adrian P. **; Bier, Mark E. **; Wheeler, Kevin **; **Spear, Kerry L.; Figliozzi, Gianine M.; Zuckerman, Ronald N.; Michrom BioResources, Auburn, CA; Chiron Corporation, Emeryville, CA.
- TPC 118 **MS Analysis of Chemical Libraries Employing a Novel Photocleavable Linker;** *Wagner, David; Geysen, H. Mario; Brown, Bradley; Glaxo Research Institute.
- TPC 119 **LC / MS Strategy for the Rapid Profiling of Solid Phase Synthetic Products;** *Rourick, Robyn, A.; Whitney, Jeffrey, L.; Klohr, Steven, E.; Volk, Kevin, J.; Kerns, Edward, H.; Lee, Mike, S.; Bristol-Myers Squibb Pharmaceutical Research Institute, Wallingford; Bristol-Myers Squibb Pharmaceutical Research Institute, Princeton.
- TPC 120 **MALDI-TOF-PSD Analysis of Peptides on Polymeric Beads;** *Griffin, Patrick; Konteatis, Zenon; Klatt, Tracey; Merck Research Laboratories; Rahway, NJ 07065.
- TPC 121 **Characterization of a Benzodiazepine Combinatorial Library By IAE / LC / MS / MS;** *Nedved, Michael L.; **Ganem, Bruce; Henion, Jack D.; Analytical Toxicology, Cornell University, Ithaca, NY 14850; Department of Chemistry, Cornell University, Ithaca, NY 14850.
- TPC 122 **Analysis of Non-peptide, Bead-bound Combinatorial Libraries by MS;** *Hemling, Mark; Hertzberg, Robert; Johnson, Walter; Mentzer, Mary; **Roberts, Gerald; Taylor, Paul; Weinsotck, Joseph; Carr, Steven; SmithKline Beecham Pharmaceuticals, King of Prussia, PA USA; SmithKline Beecham Pharmaceuticals, King of Prussia, PA USA.
- TPC 123 **Determination of the Diversity of Small-Molecule Libraries by ESI-MS;** *Dunayevskiy, Yuriy; Vouros, Paul; Carell, Thomas; Wintner, Edward A.; Rebek, Julius Jr.; Dept of Chem. and The Barnett Institute, Northeastern Univ., Boston, MA; Massachusetts Institute of Technology, Cambridge, MA.
- TPC 124 **Mapping Chemical-Space: Application and Prediction Within LC / MS;** Samuel, Mitrovich; *Willoughby, Ross; Chem-Space Assoc. Inc., Pittsburgh, PA.

Toxicology

- TPD 125 **Alkylation of E. coli Thioredoxin by S-(2-chloroethyl)glutathione;** *Erve, John; Barofsky, Lilo; Barofsky, Douglas; Deinzer, Max; Reed, Don; Oregon State University.
- TPD 126 **Optimization of Instrumental Parameters used in HRMS of DNA Adducts;** *Scheller, Nova; Ranasinghe, Asoka; Wu, Kuen Yuh; Swenberg, James A.; University of North Carolina at Chapel Hill.
- TPD 127 **Quantitative Analysis of DNA Adducts by Using HPLC / ESI-MS;** *Yen, Ten-Yang; Christova- Gueor, Nadia I.; Scheller, Nova; Swenberg, James A.; Charles, M. Judith; Dept of Env.Sci.& Eng., Univ. of North Carolina, Chapel Hill.
- TPD 128 **Fragmentation of Thioether Conjugates by ESI and Low-Energy CID;** *Oberth, C.H.; Jones, A.D.; University of California, Davis.

- TPD 129 **ESI-LC-MS analysis of heterocyclic aromatic amines and their conjugates;** *Stillwell, W. G.; Wishnok, J. S.; Kidd, L. R.; Tannenbaum, S. R.; **Turesky, R. J.; Massachusetts Institute of Technology, Cambridge, MA; Nestec, Ltd, Nestle Research Centre, Lausanne, Switzerland.
- TPD 130 **Characterization of Heterocyclic Amine Metabolites by Electrospray MS;** *Eades, Donald; Malfatti, Michael; Felton, James; Chemistry & Material Science, LLNL; Biology & Biotechnology Research Program, LLNL.
- TPD 131 **ESI-MS and ESI-MS / MS of Cephalosporins;** *Vollmer, David; Lay, Jack; National Center for Toxicological Research, Jefferson, AR.
- TPD 132 **Determination of Nitrosamines by ESI with Photochemical Enhancement;** *Vollmer, David; Lay, Jack; National Center for Toxicological Research, Jefferson, AR.
- TPD 133 **MS / MS Criteria for a Confirmatory Method for Sarafloxacin in Catfish Tissue;** *Cepa, Steven; **Menacherry, Stanley; Bavda, Lalit; Abbott Laboratories, Structural Chemistry, North Chicago, IL 60064; Abbott Laboratories, Drug Analysis, Abbott Park, IL 60064.
- TPD 134 **ANALYSIS OF BREVETOXINS IN RED TIDE ALGAE BY ON-LINE LC - ELECTROSPRAY / MS;** *Hua, Yousheng; Lu, Wenzhe; Henry, Michael S.; Pierce, Richard H.; Cole, Richard B.; Dept. of Chemistry, University of New Orleans, New Orleans, LA 70148 USA; Mote Marine Laboratory, 1600 Thompson Pkwy, Sarasota, FL 34236 USA.
- TPD 135 **DIFFERENTIATION OF PACIFIC AND CARIBBEAN CIGUATOXINS BY APCI / LC / MS;** *Musser, Steven M.; Grande, H. Ray; **Dickey, Robert; Instrumentation and Biophysics Branch, FDA, Washington, DC; Gulf Coast Seafood Laboratory, FDA, Dauphin Island, AL.
- TPD 136 **Characterization 3,4-Dichloro-1-butene Metabolites in Rat by LC-MS-MS;** Lam, Zamas; *Brach, Frank; Keller, Douglas; Carpenter, Stephen; DuPont Haskell Laboratory, Newark, DE.
- TPD 137 **Preliminary Screen for Biodegradation of Xenobiotics;** *Ottinger, Sean E.; Bach, Stephan B.H.; Guentzel, M. Neal; University of Texas at San Antonio.
- TPD 138 **Identification of Tamoxifen Metabolites in Patients;** *Poon, G.K.; Lonning, P.E.; Phillips, D.H.; Jarman, M.; CRC Centre for Cancer Therapeutics, Institute of Cancer Research, UK; University of Bergen, Haukeland Hospital, Bergen, Norway.
- TPD 139 **Biotransformation of 2,4-Dipyrrro - lidinylpyrimidine (2,4-DPP) In Vitro;** **Streep, Rob; Pearson, Paul; Zhao, Zhiyang; *Vrbanac, James; Upjohn Laboratories, Drug Metabolism Res., Kalamazoo, MI 49001; Department of Biochemistry, University of Texas, San Antonio, TX 78284.
- TPD 140 **ANALYSIS OF PAHS IN HUMAN SERUM USING CLOUD POINT EXTRACTION AND LC / MS;** *Siri-manne, Sarath R.; Ma, Li; McClure, P. Cheryl; Barr, John R.; Patterson, Jr., Donald G.; Centers for Disease Control.
- TPD 141 **HPLC-APCI-MS / MS for the Analysis of PAP Biotransformation Products;** *Benson, Linda M.; Mayeno, Arthur N.; Gleich, Gerald J.; Naylor, Stephen; Mayo Clinic, Rochester, MN.
- TPD 142 **Identification of Oligomers of Indole-3-Carbinol;** *Griffin, Donald A.; Stresser, David M.; Williams, David E.; Deinzer, Max L.; Oregon State University, Corvallis, Oregon.
- TPD 143 **GC-MS Analysis of Hydroxytestosterone to Measure Cytochrome P-450 Activity;** *Purdon, Michael P.; Lehman-McKeeman, Lois D.; Caudill, Doug; The Procter and Gamble Company.
- TPD 144 **Determination of Clenbuterol in Retinal Tissue by Electrospray LC / MS / MS;** *Tomlinson, John; Flurer, Rick; Satzger, R. Duane; National Forensic Chemistry Center, US FDA Cincinnati.
- TPD 145 **High Energy CID Spectra of Melfalan or Chlorambucil Adducted Peptides;** *Zaia, Joseph; Fenselau, Catherine; University of Maryland Baltimore County.
- TPD 146 **FAB-MS and MS-MS Studies of Extracts from Pinus Ponderosa;** *Teesch, Lynn; Lamb, Diane; Al-Mahmoud, M. S.; Rosazza, J. P. N.; High Resolution Mass Spectrometry Facility.
- TPD 147 **Integrated Mass Spectrometric / Yeast Bioassay for Genotoxin Detection;** *Serrano, Jose; Kuehl, Douglas; US EPA DULUTH MN 55804.
- TPD 148 **MONITORING ACID- AND BASE-INDUCED LIPID A DEGRADATION BY ELECTROSPRAY MS;** *Cole, Richard B.; Wang, Yan; Dept. of Chemistry, University of New Orleans, New Orleans, LA 70148 USA.
- TPD 149 **HPLC / IonSpray / MS / MS Analysis of Common and Illicit Drugs in Case Samples;** *Picotte, Pierre; Sanchez,

Gabriel; Shushan, Bori; **Sakuma, Takeo; Toxicologist Direction de expertises Judiciaires; PE-SCIEX.

Drugs and Metabolism

- TPE 150 **IN VIVO METABOLISM OF PEPTIDE E IN RAT BRAIN BY MICRODIALYSIS / ES / MS;** *Andren, Per E.; Emmett, Mark R.; Caprioli, Richard M.; University of Texas Medical School, Houston, TX.
- TPE 151 **Characterization of Metabolites of a CCK Ligand on an Ion-Trap MS;** *Moseley, Arthur; Tippin, Tim; Walsh, John; **Schwartz, Jay; Urich, Mark; Glaxo Research Institute; Finnigan-MAT.
- TPE 152 **Investigation of the Interactions Between Bicyclomycin and Rho Protein;** *Cox, Kathleen A.; Gaskell, Simon J.; Moon, Hong-sik; Park, Hyeung-geun; Widger, William R.; Kohn, Harold; The Michael Barber Centre for Mass Spectrometry; UMIST; Manchester UK; Department of Chemistry; University of Houston; Houston, TX 77204 US.
- TPE 153 **Characterization of Limonene Metabolites in Advanced Human Cancer;** **Vigushin, D.; Coombes, R.C.; *Somani, H.; Jarman, M.; Poon, G.K.; CRC Centre for Cancer Therapeutics, Institute of Cancer Research, UK; Dept. of Oncology, Charing Cross Hospital, London, UK.
- TPE 154 **An Electrospray Mass Spectrometric Study of the Gold Drug Myochrysine;** Lock, Colin J.L.; Howard-Lock, Helen E.; LeBlanc, Daren J.; *Smith, Richard W.; Department of Chemistry, McMaster University.
- TPE 155 **IDENTIFICATION OF DIPHENHYDRAMINE METABOLITES USING DEUTERATED DCIMS;** Heinze, T.M.; *Hansen, Jr., E.B.; Deck, J.; Cerniglia, C.E.; National Center for Toxicological Research, Jefferson, AR 72079.
- TPE 156 **LC / MS / MS detection of GSH-glucuronide conjugates of 2,4-diene VPA in rats;** *Tang, Wei; Abbott, Frank; The University of British Columbia, Vancouver, B.C., CANADA.
- TPE 157 **In Vivo vs. In Vitro Metabolism of Olanzapine by LC / IS / MS / MS;** *Murphy, Anthony T.; Franklin, Ronald B.; Gillespie, Todd A.; Bernstein, John R.; Eli Lilly and Co., Indianapolis, IN.
- TPE 158 **Characterization of a Novel Metabolic Reaction: The Metabolism of LY315535;** *Gillespie, Todd; Goodwin, Mike; Catlow, John; Swanson, Steve; Eli Lilly and Co., Indianapolis, IN.
- TPE 159 **Structural Elucidation of Bisbenzylisoquinoline Alkaloids by IonSpray MS / MS;** *Wu, Wu-Nan; Moyer, Michael D.; R.W. Johnson Pharmaceutical Research Institute, SpringHouse, PA.
- TPE 160 **Structures of Human Urinary Metabolites of Mazapertine by IonSpray MS / MS;** *Wu, Wu-Nan; Gisclon, Lee G.; McKown, Linda A.; The R. W. Johnson Pharmaceutical Research Institute, Spring House, PA.
- TPE 161 **Metabolic LC / MS urinary analysis of a non-competitive NMDA antagonist;** *Blake, Timothy J.; Coomber, David C.; McCarthy, Dennis J.; Eisman, Mark S.; Balestra, Michael; Murray, Robert; Fisons Pharmaceuticals, Rochester, NY.
- TPE 162 **ANALYSIS OF TAMOXIFEN METABOLITES BY ON-LINE CE-ESMS USING NONAQUEOUS MEDIA;** *Lu, Wenzhe; **Poon, Grace K.; Cole, Richard B.; Dept. of Chemistry, University of New Orleans, New Orleans, LA 70148 USA; CRC Centre for Cancer Therapeutics, Institute of Cancer Research, Surrey U.
- TPE 163 **Identification of Lotatadine Metabolites from Human Liver Microsomes;** *Cyr, Terry; Dawson, Brian; Ethier, Jean; Jurima-Romet, Malle; Menzies, Allan; Whitehouse, Larry; Bureau of Drug Research, Ottawa, Ontario, Canada.
- TPE 164 **Biomarkers of OH radical formation in rat brain by microdialysis with MPP + ; Ste-Marie, Line;** **Vachon, Luc; Boismenu, Daniel; *Montgomery, Jane; University of Montreal, Montreal; Nordic Merrell Dow Research, Laval.
- TPE 165 **2K3MVA Is Not An Obligate Intermediate Between Isoleucine & Allo-isoleucine;** *Mamer, Orval A.; **Lepine, Francois L.; MS Unit, McGill University, Montreal, Quebec, Canada; Institut Armand Frappier, Universite du Quebec, Laval, Quebec, Canada.
- TPE 166 **Characterization of reactive drug intermediates by ESI Mass Spectrometry;** *Lim, H.K.; Bhavsar, J. H.; Chan, K.; Sisenwine, S.; Wyeth-Ayerst Research, Princeton, NJ.
- TPE 167 **Capillary HPLC / CF-LSIMS Characterization of LTD4 Antagonist Metabolites;** *Yergey, James; Nicoll-Griffith, Deborah; Chauret, Nathalie; Trimble, Laird; Merck Frosst Centre for Therapeutic Research.

- TPE 168 **CE-ES-MS Analysis of Drug Metabolites in Urine;** *Ashcroft, Alison E; Major, Hilary J; Lowes, Stephen; **Wilson, Ian D; Fisons Instruments VG Organic, Altrincham, WA14 5RZ, UK.; Zeneca Pharmaceuticals, Macclesfield, SK10 4TG, UK.
- TPE 169 **Analysis of B-Agonists Using Solid Phase Extraction and LC / APci / MS / MS;** *Preece, Steve; **van Vyncht, Gery; Fisons Instruments VG Organic Analysis; Leige University.
- TPE 170 **Analysis of Cytochrome P-450 Metabolites of Arachidonic Acid by LC / MS / MS;** *Garner, Carlos O.; Belas, Frank J.; Blair, Ian A.; Depts. of Pharm. and Chem., Vanderbilt Univ., Nashville, TN.
- TPE 171 **Characterization of Acylcarnitines by GC / MS / MS;** *Carlson, Shannan; Johnson, Jodie; **Borum, Peggy; Bernier, Ulrich; Yost, Richard; Department of Chemistry, University of Florida, Gainesville, FL; Department of Food Science, University of Florida, Gainesville, FL.
- TPE 172 **Identification of in vitro and in vivo metabolites of Bosentan by LC-MS / MS;** *Hopfgartner, Gerard; Zell, Manfred; Lausecker, Berthold; Husser, Christophe; Viger-Chougnet, Antoinette; Haas, Ruth; Hoffmann-La Roche, Department of Drug Metabolism and Kinetics.
- TPE 173 **Mechanisms of Leukotriene B4 Metabolism: Negative ion ESI MS / MS analysis;** *Wheelan, Pat; Murphy, Robert, C.; Nat. Jewish Center for Immunology and Respiratory Medicine.
- TPE 174 **Characterization of Acidic Triterpenes by HPLC / ESI / MS;** *Weintraub, Susan T.; **Streeper, Robert T.; Satsangi, Neera; Stavinocha, William B.; The University of Texas Health Science Center at San Antonio; The University of Texas Health Science Center at San Antonio.
- TPE 175 **Microbore HPLC / MS / MS of CP-166,572 metabolites in the rat;** *Avery, Michael; Ballinger, William; Zembrowski, William; Inskeep, Phil; Mylari, Larry; Fouda, Hassan; Pfizer INC, Central Research Division, Groton, CT.
- TPE 176 **HPLC / ESI MS / MS for the Identification of in vitro Metabolites of CP-118,954;** *Cui, Donghui; Prakash, Chandra; Pfizer Central Research, Groton, CT 06340; Pfizer Central Research, Groton, CT 06340.
- TPE 177 **Inhibition of Aldehyde Dehydrogenase by Disulfiram and Metabolites;** *Veverka, Karen A.; Johnson, Kenneth L.; Mays, Dennis C.; Lipsky, James J.; Naylor, Stephen; Mayo Clinic, Rochester, MN.
- TPE 178 **A Study of the Metabolism of Rifabutin Using ESI-MS and Tandem MS;** *Thompson, Toni; Vouros, Paul; Koudrikova, Tatiana; Gerber, Nicholas; Northeastern University, Dept. of Chemistry, Boston, MA; The Ohio State University, College of Medicine, Columbus, OH.
- TPE 179 **LC / IonSpray / MS / MS Analysis of Bile Acids;** *LePage, Guy; Yousef, Ibrahim; Sanchez, Gabriel; Shushan, Bori; **Sakuma, Takeo; Hôpital Ste-Justine, Université de Montréal; PE-SCIEX.
- TPE 180 **Detection of Trypanothione Conjugates in Cell Cultures by ESI Tandem MS;** *Bolgar, Mark S.; Gaskell, Simon J.; Douglas, Kenneth T.; Wilton, Amanda N.; The Michael Barber Center for Mass Spectrometry; Department of Pharmacy, University of Manchester.
- TPE 181 **Characterization of Hemiketals of MDL 101146 by Normal Phase LC / ESI / MS;** *Brown, Paul W.; Emary, W. Bart; Akbari, Nisar; Marion Merrell Dow, Kansas City, MO 64134.
- TPE 182 **Analysis of secondary metabolites in crude plant extracts by electrospray;** *Wolfender, Jean Luc; Hostettmann, Kurt; **Wagner-Redeker, Winfried; Pharmacognosy and Phytochemistry, University of Lausanne; Spectronex AG, Basle.
- TPE 183 **Angiotensin II Receptor Antagonist Metabolite Identification by MS / MS;** *DeMaio, William; Morton, George; American Cyanamid Company, Medical Research Division, Pearl River NY 10965.
- TPE 184 **In vitro metabolism of FK 506 (Tacrolimus) using MALDI mass spectrometry;** *Gusev, Arkady I.; Muddiman, David C.; Proctor, Andrew; Hercules, David M.; Tata, Prasad; Venkataramanan, Raman; Department of Chemistry, University of Pittsburgh, Pittsburgh PA 15260; School of Pharmacy, University of Pittsburgh, Pittsburgh PA 15261.
- TPE 185 **Identification of levodopa and its metabolites by HPLC-Ion Spray-MS;** *Koupai-Abyazani, Mohammed R.; Esaw, Barbara; Laviolette, Barbara; Can Test Ltd., 1523 West 3rd Avenue, Vancouver, B.C., V6J 1J8, Canada.
- TPE 186 **Identification of the urinary metabolites of Brivudin in the rat;** *Triolo, An-

- tonio; Agostara, Giuseppina; Bonelli, Fabio; Crea, Attilio; Freude, H.-Gerhard; Monteagudo, Edith; A. Menarini Industrie Farmaceutiche Riunite, Firenze (Italy); Centro CNR Macromolecole Stereordinate ed otticamente attive, Pisa (Italy).
- TPE 187 **Metabolism of the neuromuscular blocker NIMBEX by LC-RAM-API-MS;** *Pleasant, Stephen; Dear, Gordon; Jones, Anne; Wellcome Research Laboratories, Beckenham, Kent UK.
- TPE 188 **A Sensitive LC / ESI / MS / MS Assay for the Antineoplastic Agent Ifosfamide;** *Goldthwaite, Charles A.; Belas, Frank J.; Phillips, Mark A.; Anthony, Lowell; Blair, Ian A.; Vanderbilt University, Nashville, TN.
- TPE 189 **Identification and Quantitation of Cyclophosphamide Using LC / ESI / MS / MS;** *Belas, Frank J.; Goldthwaite, Charles A.; Anthony, Lowell; Blair, Ian A.; Vanderbilt University School of Medicine.
- TPE 190 **Strategies for the Quantitative Analysis of Opioid Peptides in Plasma;** *Streeper, Robert T.; Weintraub, Susan T.; Marquez, Cristina D.; Smith, Philip C.; The University of Texas Health Science Center at San Antonio; The University of North Carolina at Chapel Hill.
- TPE 191 **Electrospray LC / MS and LC / MS / MS of Ecdysteroids;** *GRANT, RUSSELL.P.; GAMES, DAVID.E.; **WILSON, IAN.D.; MORGAN, E.D.; LAFONT, R.; M.S.R.U., U.W.Swansea, Swansea, Wales, SA2 8PP; Keele University, Department of Chemistry, Keele, England, ST5 5BG.
- TPE 192 **HPLC / ESI-MS / MS Studies on the Metabolism of an Atherosclerosis Combatant;** *Luther, Elbridge; Boyer, Scott; Cole, Mark; Fouda, Hassan; Destito, Rosalina; Liston, Theodore; Pfizer Inc, Groton.
- TPE 193 **HPLC / APCI-MS / MS Method for Quantitation of a Cholesterol Absorption Inhibitor;** *Gauthier, Jeffrey; Butala, Pranay; Luther, Elbridge; Fouda, Hassan; Cole, Mark; Pfizer Inc, Groton.
- TPE 194 **HPLC / ESI-MS / MS of a LTB₄ Receptor Antagonist; Glucuronide Acyl Migration;** *Cole, Mark; Luther, Elbridge; Fouda, Hassan; Gauthier, Jeffrey; Destito, Rosalina; Liston, Theodore; Pfizer Inc, Groton.
- TPE 195 **HPLC / MS / MS Determination of CP-118,954 in Human Serum;** *Avery, Michael; Needham, Shane; Fouda, Hassan; Pfizer INC, Central Research Division, Groton, CT.
- TPE 196 **HPLC / DAD / ESI-MS / MS Studies on the Metabolic Fate of a Novel PDE4 Inhibitor;** *Gauthier, Jeffrey; Bachert, Elizabeth; Liston, Theodore; Cole, Mark; Cole, Mark; Pfizer Inc, Groton.
- TPE 197 **Characterization of metabolites of Ziprasidone in human by LC-MS / MS;** *Prakash, Chandra; Kamel, Amin; Anderson, Wayne; Wilner, Keith; Pfizer Central Research, Groton, CT.
- TPE 198 **PRECLINICAL DRUG SELECTION - APPLICATION OF IONSpray LC-MS AND LC-MS / MS;** *Kelly, Michele A.; Xiao, Guang; Greenberg, Gerald E.; Kuzmich, Sandra; Robertson, Philmore; Ciba-Geigy Corporation, Pharmaceuticals Division, Summit, NJ.
- TPE 199 **In vivo and in vitro Metabolism of Immunomodulators by TOF-MS;** *Muddiman, David C; Gusev, Arkady I; Proctor, Andrew; Hercules, David M; Venkataramanan, Raman; Tata, Prasad; Diven, Warren; Department of Chemistry, University of Pittsburgh, Pittsburgh, PA 15260.
- TPE 200 **Drug Metabolism Studies That Avoid the Use of Radioisotopes;** *Hsieh, Feng-Yin; Goldthwaite, Charles A.; Nobes, Brian J.; Mayol, Robert F.; Klunk, Lewis J.; Chaudhary, A. K.; Blair, Ian A.; Vanderbilt University.
- TPE 201 **Orifice Voltage Dependent Oxidation of Dihydrolevobunolol to Levobunolol;** *Luo, Wendy; Tang-Liu, Diane; Breaux, Alan; Allergan, Inc., Irvine, CA 92713.
- TPE 202 **Metabolic Profiling Using LC / MS / MS With On-line Microdialysis Sampling;** *Rourick, Robyn A.; Kerns, Edward H.; Volk, Kevin J.; Whitney, Jeffrey L.; Lee, Mike S.; Bristol-Myers Squibb Pharmaceutical Research Institute, Wallingford; Bristol-Myers Squibb Pharmaceutical Research Institute, Princeton.
- TPE 203 **Automated HPLC / MS / MS Approaches for Rapid Identification of Metabolites;** *Cole, Mark; Gauthier, Jeffrey; Luther, Elbridge; Fouda, Hassan; Destito, Rosalina; Liston, Theodore; Pfizer Inc, Groton.
- TPE 204 **Analysis of diuretics in urine by HPLC / APCI / MS;** Yuan-Ping, Yang; *Jentaie, Shiea; Dept. of Chemistry, Nat'l Sun Yat-sen Univ., Kaohsiung, Taiwan 804.
- TPE 205 **The Detection of Concealed Drugs by Field Portable IMS and GC / MS;** *Fetterolf, Dean; Donnelly, Brian; Jourdan,

- Thomas; Forensic Science Research Unit, FBI Laboratory, Quantico, VA; Chemistry Toxicology Unit, FBI Laboratory, Washington, DC.
- TPE 206 **ANALYSIS OF ECSTASY AND OTHER DESIGNER DRUGS USING HPLC / APCI / MS;** *Hansen, Jr., E.B.; Churchwell, M.I.; Clark, C.R.; DeRuiter, J.; Noggle, F.T.; Doerge, D.R.; National Center for Toxicological Research, Jefferson, AR 72070; Department of Pharmacal Sciences, School of Pharmacy, Auburn, AL 36849.
- TPE 207 **Immunoaffinity Extraction-LC / LC / MS / MS for analysis of LSD Analogs in Urine;** *Cai, Jianyi; van Soest, Remco; Henion, Jack; Analytical Toxicology, Cornell University, 927 Warren Dr., Ithaca, NY 14850; LC Packings, Baarsjesweg 154, 1057 HM Amsterdam, The Netherlands.
- TPE 208 **Identification of Previously Unreported Metabolites of LSD in Human Urine;** *Nelson, Chad C.; Slawson, Matt H.; Reuschel, Scott A.; Foltz, Rodger L.; **Brenneisen, Rudolf; Northwest Bioanalytical, Salt Lake City, Utah; University of Berne, Berne, Switzerland.
- TPE 209 **Use of GC-MS for Confirmation of Benzodiazepines Abuse in Urine Samples;** *Lin, Zhen; Stephanson, Niclas; Beck, Olof; Dept. of Clinical Pharmacology, Karolinska Hospital, Sweden.
- TPE 210 **A Method for the Detection of Fluoxymesterone and metabolites by GC / ECNI;** * Xu, Naxing; Watson, J. Throck; Michigan State University, Department of Chemistry, East Lansing, MI 48824.
- TPE 211 **Ion Trap GC / MS and GC / MS / MS Measurement of Cocaine and its Metabolites;** *Bowers, Larry; Fregien, Kelly; Indiana University Medical Center, Indianapolis, IN.
- TPE 212 **Selected Ion Storage and Tandem Mass Spectrometry of Anabolic Steroids;** *Bowers, Larry; Indiana University Medical Center, Indianapolis, IN.
- TPE 213 **Quantification of the phosphodiesterase inhibitor CP-80,633 in human serum;** *Kamel, Amin; Schneider, Rick; Navetta, Kim; Luther, El; Fouda, Hassan; Central Research Division, Pfizer Inc, Groton, CT 06340.
- TPF 215 **MALDI of Synthetic Oligonucleotides;** *Bentzley, Catherine; **Larsen, Barbara; Johnston, Murray; University of Delaware; E.I. duPont de Nemours.
- TPF 216 **IMPROVING RESOLUTION OF OLIGONUCLEOTIDES WITH THE CURVED FIELD REFLECTRON;** *Worrall, Timothy A.; Tang, Kai; Koster, Hubert; Cotter, Robert J.; Cotter, Robert J.; The Johns Hopkins University School of Medicine; Sequenom, Inc.
- TPF 217 **Probing the Stability of Phosphorothioate Oligonucleotides by MALDI-TOFMS;** *Wang, Bing; Bourque, Andre; Belenky, Alexi; Cohen, Aharon; Analytical Research, Hybridon, Inc., Milford, MA.
- TPF 218 **6-Aza-2-Thiothymine: A Good Matrix for the Analysis of Oligonucleotides;** *Lecchi, Paolo; Le, Han; Pannell, Lewis; Lab. of Analytical Chemistry, NIDDK, NIH, Bethesda MD 20892.
- TPF 219 **MALDI-MS - a New Tool to Monitor the Activ. of Nucl. Acid Modifying Enzymes;** *Nordhoff, E.; **Cramer, R.; Kirpekar, F.; Hahner, S.; Roepstorff, P.; Haglund, Jr., R.F.; Hillenkamp, F.; Department of Molecular Biology, University of Odense, Odense, Denmark; Department of Physics and Astronomy, Vanderbilt University, Nashville, TN.
- TPF 220 **Study of PAH-DNA adducts by CF-FABMS;** *Plante, Sylvie; Bertrand, Michel, J.; University of Montreal, Montreal, Canada.
- TPF 221 **MALDI-TOF Analysis of PAH-modified DNA Adducts at the Femtomole Level;** *Gooden, Jonathon; Gross, Michael; Washington University, St Louis, Missouri; University of Nebraska Medical Center, Omaha, Nebraska.
- TPF 222 **Tandem MS / MS for Determining Structural Isomers of PAH-DNA Adducts;** *Byun, Jaeman; Vidavsky, Ilan; Gross, Michael; Mulder, Patrick; Li, Kai-Ming; Cavalieri, Ercole; Department of Chemistry, Washington University, St. Louis, MO 63130; Eppley Institute, University of Nebraska Medical-Center, Omaha, NE 68198.
- TPF 223 **Analysis of benzol[a]pyrene adducts to DNA in fish samples by CZE-ES-MS;** *Barry, John P.; Norwood, Curt; Vouros, Paul; Dept. of Chem. and Barnett Institute, Northeastern Univ., Boston, MA.; US EPA-ERL, Narragansett, RI.
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- Nucleic Acids and Constituents**
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- TPF 214 **Protocols for DNA Mapping and Screening by MALDI MS;** *Bai, Jian;

- TPF 224 **DNA Adduct and Probe Detection by Electrophore Mass Spectrometry;** *Giese, Roger W.; Abushamaa, Amir; Naim, Abdul; Murugaiah, Veeravagu; Xu, Linxiao; Magiera, Daniel; Graner, Helena; Ismail, Yasser; Northeastern University, Boston, MA 02115.
- TPF 225 **Analysis of Hydroxyl Radical Modification of DNA using LC / MS / MS;** *Kowalski, E.M.; Chaudhary, A.K.; Blair, I.A.; Vanderbilt University, Nashville, TN.
- TPF 226 **The Application of CE / ESI / MS / MS for Detection of IQ Adducts of DNA;** *Rindgen, Diane; Vouros, Paul; Turesky, Robert J.; Dept. of Chem. and the Barnett Institute, Northeastern Univ., Boston, MA; Nestec Ltd., Nestle Research Centre, Lausanne, Switzerland.
- TPF 227 **GC / MS Quantitation of DNA Oxidation Products;** Oh, Chang-Hwan; *Iden, Charles R.; Department of Pharmacological Sciences, Health Sciences Center, SUNY-Stony Brook, Stony Brook, NY 11794-3400.
- TPF 228 **Capillary Isotachopheresis-Mass Spectrometric Determination of DNA Damage;** *Zhao, Zhongxi (Zack); Fuciarelli, Alfred F.; Smith, Richard D.; Pacific Northwest Laboratory, Richland, WA.
- TPF 229 **Analysis of DNA base modifications in oligonucleotides using LC / ES MS;** *Chaudhary, A. K.; Reddy, G. R.; Compton, J. L.; Marnett, L. J.; Blair, I. A.; Vanderbilt University School of Medicine, Nashville TN.
- TPF 230 **MALDI-MS / MS Studies on Peptides using Four Sector Tandem Mass Spectrometer;** *Krishnamurthy, Thaiya; Prabhakaran, Muthu; Long, S. Randolph; U.S. Army Edgewood RD & E Center, Aberdeen Proving Ground, MD, 21010-5423.
- TPF 231 **Micro electrospray MS / MS for the analysis of modified oligoribonucleotides;** *Wolter, M. A.; **Wilm, M. S.; Mann, M.; Engels, J. W.; Johann Wolfgang Goethe-University, 60054 Frankfurt, Germany; European Molecular Biology Laboratory, 69117 Heidelberg, Germany.
- TPF 232 **ESMS of oligonucleotides and non covalent interactions studies;** *Potier, Noelle; Bischoff, Rainer; Van Dorsselaer, Alain; Laboratoire de Spectrométrie de Masse Bio-Organique-Strasbourg (France); Transgne-Strasbourg (France).
- TPF 233 **Non-Covalent Associations of Metal Complexes with DNA Duplexes by ESI-MS;** *Harms, Amy C.; Smith, Richard D.; Jenkins, Yonchu; Barton, Jacqueline K.; Pacific Northwest Laboratory, Richland, WA 99352; California Institute of Technology, Pasadena, CA 91125.
- TPF 234 **Correlation Between ESI-MS, CID Data, and DNA Duplex Melting Temperature;** *Gale, David C.; Morris, A. Kirk; Harms, Amy C.; Camp II, David G.; Sisk, Ellen C.; Fuciarelli, Al F.; Udseth, Harold R.; Smith, Richard D.; Pacific Northwest Laboratory, Richland, WA 99352.
- TPF 235 **Characterization of oligonucleotide-peptide hybrids by MALDI and ESI MS;** *Sochacki, Marek; Bergmann, Frank; Tam, Steve; Michel, Hanspeter; Hoffmann - La Roche Inc., Nutley, NJ, 07110-1199.
- TPF 236 **Routine FAB Mass Spectra of Oligonucleotides: Enhancement by Crown Ethers;** *Le, Han; Lecchi, Paolo; Sayer, Jane; Jerina, Donald; Pannell, Lewis; Lab. of Analytical Chemistry, NIDDK, NIH, Bethesda MD 20892; Lab. of Bioorganic Chemistry, NIDDK, NIH, Bethesda MD 20892.
- TPF 237 **Fragmentation of Multiply-Charged Oligonucleotides in Triple Quadrupoles;** *Pomerantz, Steven C.; McCloskey, James A.; Department of Medicinal Chemistry, University of Utah, Salt Lake City.
- TPF 238 **A New Approach for DNA Sequencing and Mutation Detection with ESI-MS;** *Terunuma, Hideya; Naito, Yasuhiro; Tsuneyoshi, Toshihiro; Arakawa, Ryuichi; Ishikawa, Keiichi; Koga, Yoshinori; Prockop, Darwin; Department of Surgery, Suruganishi Hospital.
- TPF 239 **ESI-MS on a sector instrument for the analysis of oligonucleotides;** *Wolter, M. A.; Engels, J. W.; Montanarella, L.; Facchetti, S.; Joint Research Centre, Environment Institute, TP290, 21020 Ispra, Italy; Johann Wolfgang Goethe-University, 60054 Frankfurt, Germany.
- TPF 240 **FAB / MS Confirmation of Modified Deoxynucleotides in Small Oligomers;** Rieger, Robert A.; *Iden, Charles R.; Department of Pharmacological Sciences, Health Sciences Center, SUNY-Stony Brook, Stony Brook, NY 11794-3400.
- TPF 241 **The LCMS of Synthetic Oligonucleotides;** Bothner, Brian; Chatman, Kelly; Sarkisian, Molly; *Siuzdak, Gary; The Scripps Research Institute, La Jolla.
- TPF 242 **Analysis of DNA Analogues in Pharmaceutical Applications Using ESI-MS;**

- *Chen, Ling; **Fearon, Karen; Nuwaysir, Lydia; McLean, Matthew; PERKIN ELMER, Applied Biosystems Division, Foster City, CA; LYNX THERAPEUTICS, Inc., Hayward, CA.
- TPF 243 **Detection of Imidazoleacetic Acid Riboside by FAB/MS and ESI/MS;** Rieger, Robert A. (1); Reddy, D. Meghanath(1); Thomas, Boban (2); Prell, George D. (2); *Iden, Charles R. (1); Dept. of Pharmacological Sciences, SUNY-Stony Brook, Stony Brook, NY 11794; Dept. of Pharmacology, Mt. Sinai Medical Center, New York, NY 10029-6574.
- TPF 244 **Characterization of 1,2,3,4-diepoxybutane purine adducts using LC/ESI/MS/MS;** *Kambouris, S. J.; Chaudhary, A. K.; Blair, I. A.; Vanderbilt University.
- TPF 245 **A Study of Metal Ion Interactions With Nucleosides by LSIMS;** *Paul, G. J. C.; Theophanides, T.; Anastassopoulou, J.; **Marcotte, I.; Bertrand, M. J.; National Technical University of Athens; University of Montreal.
- TPF 246 **Gas-Phase Chemistry of Metal(II)-Ion-Complexes of Monophosphates;** *Adams, Jeanette; Hamilton, Jill; Department of Chemistry, Emory University.
- TPF 247 **Studies of Enzyme-Catalyzed Reactions by ESI-MS and MS-MS;** Tang, Xue-Jun; Nieves, Edward; Wang, Ri-xiu; Leyh, Thomas; Albert Einstein College of Medicine, Bronx NY 10461.
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- Proteins and Peptides**
- TPG 248 **In situ digestion procedures and analysis of the digest by HPLC/ESI/MS;** *Falchetto, Rocco; Shabanowitz, Jeffrey; Owens, Gary; Hunt, Donald F.; University of Virginia, Department of Chemistry, Charlottesville, VA 22901; University of Virginia, Department of Physiology, Charlottesville, VA 2290.
- TPG 249 **Enzymatic fragmentation with immobilized enzymes and LC/MS analysis;** *Raida, Manfred; Forssmann, Wolf-Georg; Niedersaechsisches Institut fuer Peptid-Forschung.
- TPG 250 **Seprn / Manipulation of Proteins using Polymeric 5-HPLC On-line with ESI/MS;** *Hail, Mark; Warrack, Bethanne; Taylor, Susan; Baldwin, Sam; Stoney, Ken; Lee, Mike; Bristol-Myers Squibb PRI, PO Box 4000, Princeton, NJ 08543; Michrom BioResources, Inc., 1945 Industrial Dr., Auburn, CA 95603.
- TPG 251 **Comparison of a TSQ MS to a Reflectron TOF MS with Electrospray Ionization;** *Verentchikov, Analoti; Hsieh, Frank; Tomany, Michael; Gabeler, Stephen; Vestal, Marvin; Martin, Stephen; PerSeptive Biosystems, Inc.
- TPG 252 **Peptide Mapping on a Nitrocellulose Membrane with Analysis by MALDI MS;** *Bai, Jian; Qian, Mark G; Liu, Yan-Hui; Liang, Xiaoli; Lubman, David M; Department of Chemistry, The University of Michigan.
- TPG 253 **Rapid Identification of Variant Enzymes from Commercial Detergent Products;** *Lacey, M.P.; Keough, T.; Sun, Y.; Bauer, M.D.; Grant, R.A.; Bennett, C.B; The Procter and Gamble Company.
- TPG 254 **HPLC-ESI Ion Trap MS/MS Analysis of Proteins Separated by 2D-PAGE;** *Kanai, Michiko; Seta, Kazuo; Land, Adrian; Bier, Mark; **Nakayama, Hiroshi; Isobe, Toshiaki; Okuyama, Tsuneo; Finnigan MAT, Hatsudai, Shibuya-ku, Tokyo 151, Japan; Tokyo Metropolitan University, Hachioji-shi, Tokyo 192-03, Japan.
- TPG 255 **Automated MALDI Analysis for the Identification of Proteins from 2-D Gels;** Sutton, C.W.; *Cottrell, J. S.; Wheeler, C.; Corbett, J. M.; **Dunn, M. J.; Finnigan MAT Ltd, Hemel Hempstead, Herts. HP2 4TG, UK; Heart Science Centre, Harefield Hospital, Middx. UB9 9JH, UK.
- TPG 256 **STRATEGIES FOR IDENTIFICATION OF 2D GEL PROTEINS BY MASS SPECTROMETRY;** *Clauser, Karl R.; Hall, Steven C.; Andrews, Lori E.; Smith, Diana M.; Matsui, Neil; Tran, Huu M.; Epstein, Lois B.; Burlingame, Alma L.; Dept. of Pharmaceutical Chemistry, University of California, San Francisco; Cancer Research Institute, University of California, San Francisco.
- TPG 257 **Mass Spectrometry of Proteins Directly Isolated from SDS Gels;** *Schuhmacher, Martina; Wunderlin, Markus; Przybylski, Michael; University of Konstanz, 78434 Konstanz, Germany.
- TPG 258 **Sequencing peptides: post-source decay MS without scanning the reflectron;** *Cordero, M.M.; Cornish, T.J.; Cotter, R.J.; The Johns Hopkins University School of Medicine.
- TPG 259 **Evaluation of MALDI-PSD and MALDI-CID for Structural Analysis;** *Carr, Steven; Hemling, Mark; Roberts, Gerald; Bean, Mark; Annan, Roland;

- TPG 260 Hilliard, George; **Hoyes, John; SmithKline Beecham Pharmaceuticals, King of Prussia, PA USA; VG Analytical, Wythenshawe, Manchester UK.
- TPG 261 **Peptide Sequencing: MALDI Time-of-Flight vs Electrospray Triple Quadrupole;** Overberg, A.; Ingendoh, A.; *Keane, A.; Sutton, C.; Harrison, M.; Cottrell, J. S.; Finnigan MAT Ltd., Hemel Hempstead, Herts. HP2 4TG, UK.
- TPG 262 **Deuterated Terminating Agents for Ladder Sequence Analysis by MALDI-TOF MS;** Holland, Ricky; *Lay, Jackson; Chiarelli, M. Paul; Vollmer, David; FDA-National Center for Toxicological Research.
- TPG 263 **Using ESI to Characterize Protein Sequencing Ladders;** *Saha, Sanat; Beavis, Ronald C.; Skirball Institute, New York University Medical Center.
- TPG 264 **Sequence Analysis of C- and N-Terminal Blocked Peptides by PSD-MALDI;** *Ingendoh, Arnd; Seta, Kazuo; Kanai, Michiko; **Yamakawa, Yoshio; Omori-Satoh, Tamotsu; Isobe, Toshiaki; Okuyama, Tsuneo; Finnigan MAT Instruments Inc., Hatsudai, Shibuya-ku, Tokyo 151, Japan.; Japanese National Institute of Health, Shinjuku-ku, Tokyo 162, Japan.
- TPG 265 **An Evaluation of Peptide Fragmentation by MALDI-TOF PSD and MALDI CID MS / MS;** *Adams, Gregory W.; Medzihradzsky, Katalin F.; Hall, Steven C.; Burlingame, Alma L.; **Bateman, Robert H.; Green, Martin R.; Maisey, Anne; Mass Spectrometry Facility, University of California, San Francisco; VG Organic, Manchester, M23 9LE, UK.
- TPG 266 **A Novel N-Terminal Derivative Designed to Simplify Peptide Fragmentation;** *Sherman, Nicholas E.; Yates, Nathan A.; Jeffrey, William; Bartlett-Jones, Mike; Shabanowitz, Jeffrey; Hunt, Donald F.; Pappin, Darryl; Department of Chemistry, University of Virginia, Charlottesville, VA 22901; Protein Sequencing Laboratory, Imperial Research Cancer Fund, London, UK.
- TPG 267 **High Energy CID Spectra of Peptides Containing Pyridylethylcysteines;** *Wolf, Susan; Biemann, Klaus; Massachusetts Institute of Technology, Cambridge, MA.
- TPG 268 **Surface-Induced Dissociation of Cyclic Peptides;** *Dongre, Ashok; Wysocki, Vicki; **Hayward, Mark; Virginia Commonwealth University; American Cyanamid Company.
- TPG 269 **Peptide Sequencing at the Low Femtomole Level Using PC-CE-MS / MS;** *Tomlinson, Andy J.; Johnson, Kenneth L.; Naylor, Stephen; Mayo Clinic, Rochester, MN.
- TPG 270 **Controlled fragmentation of derivatized peptides;** *Lindh, Ingemar; Griffiths, William; Bergman, Tomas; Sjvval, Jan; Karolinska Institutet, Stockholm.
- TPG 271 **Fragmentation of Small Non-polar Peptides Containing NMe-Ala and Pro;** *Vaisar, Tomas; Urban, Jan; Molecumetics Ltd., Bellevue, WA 98005.
- TPG 272 **DETECTION OF PHOSPHORYLATED AND SULFATED PEPTIDES BY LC-ESI-MID;** *Jedrzejewski, Paul; Schnolzer, Martina; Lorenz, Peter; Lehmann, Wolf D.; German Cancer Research Center.
- TPG 273 **Enzymatic Reactions on Membranes for the MALDI Analysis of Phosphoproteins;** *Liao, Pao-Chi; Gage, Douglas A.; Allison, John; Michigan State University, East Lansing, MI.
- TPG 274 **Improved CID Spectra of Peptide Ions Using Stepped Collision Potentials;** *Annan, Roland; Carr, Steven; SmithKline Beecham Pharmaceuticals, King of Prussia, PA USA.
- TPG 275 **Location of peptide phosphorylation sites by use of (+) and (-)ESI-MS / MS;** *Busman, M.; Schey, K. L.; Knapp, D. R.; Medical University of South Carolina, Charleston, SC.
- TPG 276 **Phosphorylation and N-terminal acetylation of phosrestin I in fly eyes;** *Kinumi, Tomoya; Jackson, Kenneth; Kubota, Masayuki; **Ohashi, Mamoru; Matsumoto, Hiroyuki; The Univ. of Oklahoma Health Sciences Center, Oklahoma City; The Univ. of Electro-Communications, Tokyo, Japan.
- TPG 277 **Electrospray FTICR Mass Spectrometry of Modified Peptides and Proteins;** *Nawrocki, Joseph; Watson, Cliff; Eyler, John; University Of Florida, Gainesville.
- TPG 278 **Mass Spectrometric Protein Identification in Completely Sequenced Genomes;** *Mann, Matthias; Jensen, Ole N.; Vorm, Ole; Houthaeve, Tony; Wilm, Matthias; Mortensen, Peter; Shevshenko, Andrej; European Molecular Biology Laboratory (EMBL).
- TPG 279 **Useful Tables of Possible and Probable Peptide Masses;** *Mann, Matthias; European Molecular Biology Laboratory (EMBL).
- TPG 280 **Analysis of Immunoprecipitated Proteins by Using Tandem Mass Spec-**

- trometry**; *Schieltz, David M.; Eng, Jimmy K.; Yates, John R.; University of Washington.
- TPG 280 **Protein Database Searching with Ion Trap MSn Spectra**; *Eng, Jimmy; Yates, John; Schieltz, David; University of Washington.
- TPG 281 **Mass Accuracy Requirements to Map Proteolytic Peptides from a Protein**; *Liao, Pao-Chi; Allison, John; Gage, Douglas A.; Michigan State University, East Lansing, MI.
- TPG 282 **Protein Identification by Database Searching: A Bayesian Algorithm**; *Zhang, Wenzhu; Chait, Brian T.; The Rockefeller University, 1230 York Ave., New York, NY 10021.
- TPG 283 **Applications of a New Algorithm for Deconvolving Multiply Charged Spectra**; *Barclay, Victoria; Bonner, Ron; DeNoyer, Lyn; Dodd, Jack; PE Sciex Instruments, Toronto, Canada; Spectrum Square Associates, Ithaca, NY.
- TPG 284 **DATABASE FOR MASS SPECTRA OF PROTEINS**; *Feny, David; **Beavis, Ron C.; Chait, Brian T.; Rockefeller University, New York, NY 10021; New York University Medical Center, New York, NY 10016.
- TPG 285 **Characterization of Protein Digests Using Novel Scanning (Funky Ramps)**; *Allen, Mark; Anacleto, Joseph; Bonner, Ron; Nuwaysir, Lydia; Bori, Shushan; Perkin Elmer Sciex, Thornhill.
- TPG 286 **Interpretation of Peptide CID Spectra using Artificial Neural Networks**; *Scarberry, R. E.; Zhang, Z.; Knapp, D. R.; Medical University of South Carolina, Charleston, SC.
- TPG 287 **Peak Matching Techniques for Characterizing Protein Heterogeneity**; *Johnson, Kenneth L.; Tomlinson, Andy J.; Naylor, Stephen; Mayo Clinic, Rochester MN.
- TPG 288 **Identification of Proteins Using LC / MS / MS on an Ion Trap Mass Spectrometer**; *Lane, W.S.; **Land, A.P.; Jardine, I.; Bier, M.E.; Microchemistry Facility, Harvard University, Cambridge, MA; Finnigan MAT, San Jose, CA.
- TPG 289 **High Sensitivity Protein Sequencing with ESI-FTMS**; *Guan, Ziqiang; Aaserud, David; Valaskovic, Gary; Kelleher, Neil; McLafferty, Fred; Cornell University Ithaca.
- TPG 290 **ESI / FTMS of Enzyme (■ 40 kDa) Sequence, Heterogeneity, and Inhibition**; *Wood, Troy D.; **Kelleher, Neil L.; Little, Daniel P.; Begley, Tadgh P.; McLafferty, Fred W.; Chen, Lorenzo H.; Borders, Montie; Kenyon, George H.; Cornell University.
- TPG 291 **Peptide Mapping by LC / MS / MS Using a Triple Quad or Ion Trap Spectrometer**; *Baldwin, Samuel W.; Stoney, Ken; **Land, Adrian P.; Bier, Mark E.; Wheeler, Kevin; Michrom BioResources, Auburn, CA; Finnigan MAT, San Jose, CA.
- TPG 292 **Protein Molecular Weight Determination on Quadrupole and Ion Trap Systems**; *Land, A.P.; Mylchreest, I.C.; Bier, M.E.; Wheeler, K.P.; Finnigan MAT, San Jose, CA.
- TPG 293 **MS / MS in an Ion Trap / reflectron Time-of-flight Mass Spectrometer**; *Qian, Mark G.; Zhang, Yu; Bai, Jian; Lubman, David M.; University of Michigan, Ann Arbor, MI.
- TPG 294 **MS / MS of Alkali Cationized Peptides Using Quadrupole Ion Trap**; *Lin, Tong; Glish, Gary L.; Dept. of Chemistry, Univ. of North Carolina at Chapel Hill.
- WEDNESDAY ORALS**
- 8:30 **ASMS Business Meeting**
- 9:15 **Plenary Lecture. Recipient of the ASMS Award for Distinguished Contribution to Mass Spectrometry**
- 10:05 **Break**
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- Morning** **New Approaches to Quantitative Mass Spectrometry, organized by Sue Weintraub**
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- WOA 10:30 **Quantitative Aspects of Electrospray and MALDI MS**; *Caprioli, Richard M.; University of Texas Medical School, Houston, TX.
- WOA 10:50 **Importance of Desalting Oligonucleotides in Quantitative Electrospray MS**; *Greig, Michael J.; Klopchin, Patrick G.; Wheeler, Patrick D.; Griffey, Richard H.; Isis Pharmaceuticals Carlsbad, CA.
- WOA 11:10 **Rapid Quantitation of Eicosanoids in Inflammation Models by ES / MS / MS**; *Duffin, Kevin; Margalit, Alon; Isakson, Peter; Monsanto Corporate Research, Monsanto Co., St. Louis.
- WOA 11:30 **Serum Albumin Determination Using LC / MS with Affinity Chromatography**; *Bunk, David; Welch, Michael; National Institute of Standards and Technology, Gaithersburg, MD 20899.
- WOA 11:50 **Quantification of Pranlukast and SB218663 in Plasma Samples Using LC**

- / MS / MS; *Bi, Honggang; Lundberg, David; Pirhalla, Jill; McHugh, Charles; Marchese, Alfredo; SmithKline Beecham Pharmaceuticals, King of Prussia.
- WOA 12:10 **Application of Ionspray MS / MS Quantification of Beclomethasone Dipropionate;** *Schorno, Karl S.; Winslow, L. D.; Kansas City Analytical Services, Shawnee, Kansas. Afternoon
- WOA 04:00 **Quantitative Analysis of Low Molecular Weight Biomolecules by MALDI-TOF;** *Duncan, Mark W.; Lidgard, Ray; Biomed. MS Unit, Univ. New South Wales, Sydney, AUSTRALIA.
- WOA 04:20 **Quantitative Analysis of Angiotensin II by MALDI / TOF MS;** *Nicola, Anthony J.; Gusev, Arkady I.; Proctor, Andrew; Hercules, David M.; Jackson, Edwin K.; Department of Chemistry, University of Pittsburgh, Pittsburgh, PA 15260.
- WOA 04:40 **Selection of Internal Standards for Quantification by MALDI;** *Wilkinson, William R.; Gusev, Arkady I.; Proctor, Andrew; Houalla, Marwan; Hercules, David M.; University of Pittsburgh, Pittsburgh, PA.
- WOA 05:00 **Use of Isotopic Surrogates in the Quantitation of Endogenous Analytes;** *Alexander, Michael; Abolin, Craig; Sandoz Pharmaceuticals, East Hanover, New Jersey.

Morning Electrospray Ionization - Fundamentals, organized by Gary van Berkel

- WOB 10:30 **The electrospray mechanism and its effect on gas phase ion yields;** Tang, Liang; Ikonomou, Michael G.; Blades, Arthur T.; Klassen, John S.; *Kearle, Paul; Department of Chemistry, University of Alberta, Edmonton, AB, Canada.
- WOB 11:10 **Electrochemical Aspects of Electrospray;** *Zhou, Feimeng; Van Berkel, Gary; Oak Ridge National Laboratory.
- WOB 11:30 **High-Frequency Synchronization of Electrospray Current using Pulsed Tension;** *Beaugrand, C.; Charbonnier, F.; Rolando, C.; Sablier, M.; Saru, F.; Ecole Normale Supérieure, Paris, FRANCE.
- WOB 11:50 **Characterization and Implementation of Micro-Flow Electrospray Nebulizers;** *Covey, Thomas; Sciex, Thornhill, Ontario.
- WOB 12:10 **How are electrospray ions born free? - Dole vs. Iribarne Revisited;** *Fenn, John B.; Rosell, Joan; Virginia Commonwealth University.

AFTERNOON

- WOB 04:00 **Is Electrospray Ion Production Concentration Dependent?;** *Coopersmith, Brad; Hamilton, Brenda; Abolin, Craig; Sandoz Pharmaceuticals East Hanover, NJ.
- WOB 04:20 **DEPENDENCE OF CHARGE STATE DISTRIBUTION ON ANALYTE CONCENTRATION IN ESI / MS;** Wang, Guangdi; *Cole, Richard B.; Dept. of Chemistry, University of New Orleans, New Orleans, LA 70148 USA.
- WOB 04:40 **PHYSICAL PROCESSES OF ELECTROSPRAY;** *Willoughby, Ross; Sheehan, Edward; Mitrovich, Samuel; Chem-Space Associates, Pittsburgh.
- WOB 05:00 **Ion Mobility Spectrometric / Mass Spectrometric Study of Electrospray Ions;** *Guevremont, Roger; Siu, K.W. Michael; Wang, Jianyao; Inst. Envir. Res. and Tech., NRC, Ottawa, K1A 0R6 Canada.

Morning Fourier Transform Mass Spectrometry, organized by Carlito Lebrilla

- WOC 10:30 **FT-ICR AND OTHER COHERENT RADIATION SPECTROSCOPES;** *Comisarow, Melvin; University of British Columbia.
- WOC 10:50 **Principles and Design of Ion Traps for FT-ICR Mass Spectrometry;** *Marshall, Alan G.; Guan, Shenheng; National High Magnetic Field Laboratory, Florida State U., Tallahassee, FL.
- WOC 11:10 **Advantages of High Mass Accuracy MALDI-FTMS for Tryptic Mapping;** *Stults, John; Li, Yunzhi; McIver, Jr., Robert; Genentech, Inc., South San Francisco.
- WOC 11:30 **EVALUATION OF DISSOCIATION TECHNIQUES FOR MALDI-FTMS OF OLIGONUCLEOTIDES;** *Hettich, Robert; Stemmler, Elizabeth; Oak Ridge National Laboratory, Oak Ridge, TN 37831-6120.
- WOC 11:50 **A Dual Chamber Approach to FT-MS Offering ESI, MALDI, FAB, and EI Sources;** *Gard, Eric; Carroll, James; Green, Kirk; Fannin, Steve; Wu, Jiangyue; Camara, Elvira; Lebrilla, Carlito; University of California.
- WOC 12:10 **Massive Cluster Impact Coupled with Fourier Transform Mass Spectrometry;** *Speir, J. Paul; Cornett, D. Shannon; Kruppa, Gary H.; **Wronka, John; Laukien, Frank; Bruker Analytical Systems Inc, Billerica, MA.

AFTERNOON

- WOC 04:00 **FT-ICR Mass Spectrometry of Very Highly Charged Atomic Ions;** *Schweikhard, Lutz; Becker, Stefan; Beiersdorfer, Peter; Beck, Bret; Elliott, Steve; Lawrence Livermore National Laboratory.
- WOC 04:20 **ESI/FTMS Instrumentation for Tandem Mass Spectrometry;** *O'Connor, Peter B.; Wood, Troy D.; Little, Daniel P.; Guan, Ziqiang; Valaskovic, Gary A.; McLafferty, Fred W.; Cornell University.
- WOC 04:40 **Fragmentation of Labelled Lysozymes and Derivatives by FT MS;** *Robinson, Carol; Miranker, Andrew; Kruppa, Gary; Dobson, Christopher; Oxford Centre for Molecular Sciences, University of Oxford.
- WOC 05:00 **ESI-FTICR Methods for Bioaffinity Characterization Mass Spectrometry;** *Bruce, James; Anderson, Gordon; Chen, Ruidan; Cheng, Xueheng; Gale, David; Hofstadler, Steven; Schwartz, Brenda; Smith, Richard; Pacific Northwest Laboratory.

Morning Laser Desorption Ionization - Fundamentals, organized by Ron Beavis

- WOD 10:30 **Fast Metastable Ion Fragmentation In MALDI;** *Brown, Robert; Reiber, Duane; Lennon, John; Utah State University, Logan, UT.
- WOD 10:50 **Delayed Extraction of MALDI Ions in a Reflecting TOF Spectrometer;** *Ens, W; Dworschak, R G; Spicer, V; Standing, K G; Physics Department, University of Manitoba, Canada R3T 2N2.
- WOD 11:10 **Investigation of Selective Detection in Peptide Mixtures by MALDI MS;** *Yu, Wen; Vath, James; Scoble, Hubert; Structural Biochemistry, Genetics Institute, Andover, MA.
- WOD 11:30 **Examining MALDI Ion Formation at Various Laser Irradiances;** *Campo, Karen K.; Edmondson, Ricky D.; Russell, David H.; Laboratory for Biological Mass Spectrometry, Texas A & M University.
- WOD 11:50 **Continuous Flow MALDI in an Ion Trap-ReTOF Mass Spectrometer;** *He, Ling; Liang, Li; Li, Xuhui; Lubman, David; University of Michigan, Ann Arbor, MI.
- WOD 12:10 **Lanthanide Oxide Cluster Ions Produced by Laser Ablation;** *Gibson, John K.; Oak Ridge National Laboratory.

AFTERNOON

- WOD 04:00 **Role of Solubility in the Preparation of Synthetic Polymer Samples;** King,

Richard; Goldschmidt, Robert; Xiong, Yansan; *Owens, Kevin; Hanton, Scott; Department of Chemistry, Drexel University, Philadelphia, PA.

- WOD 04:20 **Mechanistic Implications of MALDI Ion Signal Profiles;** *Kinsel, Gary; Edmondson, Ricky; Russell, David; University of Texas at Arlington, Arlington, TX 76019.
- WOD 04:40 **Dissecting MALDI-TOF Mass Spectra;** *Allison, John; Liao, Pao-Chi; Lavine, Gary; Hiller, Joseph; Michigan State University, East Lansing, MI.
- WOD 05:00 **MALDI Sample Preparation Techniques By X-ray Photoelectron Spectroscopy;** *Thompson, Stephen; Jones, David; Robinson, Kevin; Kratos Analytical Ltd.

Morning Mass Spectrometry and the Earth's Atmosphere, organized by Al Viggiano

- WOE 10:30 **Sift Studies of the Reactions of H₃O + with a Series of Sulfides and Thiols;** Williams, Ted L.; Babcock, Lucia M.; Adams, Nigel G.; Decker, Brian K.; *Nigel Adams; Department of Chemistry, University of Georgia, Athens, Georgia, 30602, USA.
- WOE 10:50 **Ion Chemistry Relevant for Chemical Ionization Detection of SO₃;** *Arnold, Susan T; Morris, Robert A.; Viggiano, A.A.; Jayne, John T.; Phillips Laboratory, Hanscom AFB.
- WOE 11:10 **Guided-ion beam measurements of the O + (4S) + HCN ion-molecule reaction;** *Bastian, Michael; Dressler, Rainer; Murad, Edmond; Phillips Laboratory, Hanscom AFB, MA.
- WOE 11:30 **The Study of HCFC Radicals Decomposition by NR Mass Spectrometry;** *Sadilek, Martin; Turecek, Frantisek; University of Washington, Seattle.
- WOE 11:50 **Astrophysical Thermochemistry: The Heats of Formation of C₃H₂ isomers;** *Chyall, Leonard; Squires, Robert; Purdue University, Department of Chemistry.
- WOE 12:10 **Space applications of the new TOF mass spectrometers;** *Managadze, George; Space Research Institute of the Russian Academy of Science, Moscow, Russia.

WEDNESDAY POSTERS

Ion-Molecule Reactions

- WPA 001 **Oxidation Reactions of Cationic Vanadium Clusters;** *Rodgers, M. T.; Griffin,

- J. B.; Armentrout, P. B.; University of Utah, Salt Lake City, UT.
- WPA 002 **Chemisorption of Hydrogen Molecules on Vanadium Cluster Cations;** **Di-
etrich, G.; Dasgupta, K.; Kluge, H.-J.;
Lindinger, M.; Lützenkirchen, K.;
*Schweikhard, L.; Ziegler, J.; Inst. f.
Physik, J. Gutenberg-Universitdt, D-
55099 Mainz, Germany; Inst. f. Kern-
chemie, J. Gutenberg-Universitat, D-
55099 Mainz, Germany.
- WPA 003 **Metal Ion / Molecule Chemistry using
a Radio Frequency Glow Discharge
Source;** *Eanes, Ritchie C.; Christopher,
Steven J.; Marcus, R. Kenneth; Clemson
University.
- WPA 004 **GENERATION AND CHARACTERI-
ZATION OF SILACYCLOPENTADI-
ENYL COMPLEXES OF IRON;**
*Kardash, Dawn; Kloos, Steve; Boud-
jouk, Phil; Jacobson, Denley; North
Dakota State University, Fargo.
- WPA 005 **Novel Reactions of FeC₅H₆ + with
Alkynes;** *Kardash, Dawn; Edwards,
Michael; Jacobson, Denley; North Dakota
State University.
- WPA 006 **Alkyne Cycloaddition Mediated by Fe
+ ;** *Wold, Chad; Kardash, Dawn; Ja-
cobson, Denley; North Dakota State Uni-
versity.
- WPA 007 **Structure & Reactivity of
(FeCNC₃H₅Cl) + Complexes;** Capron,
L.; Mestdag, H.; *Rolando, C.; Sablier,
M.; Ecole Normale Superieure, Paris,
FRANCE.
- WPA 008 **Ethylene Insertion and Hydrogenolysis
Rates of [(C₅Me₄)SiMe₂(n-t-Bu)]ZrMe
+ ;** *Hayes, T. W.; Alameddin, N. G.;
Richardson, D. E.; Eyler, J. R.; Watson, C.
H.; University of Florida, Gainesville.
- WPA 009 **Gas Phase Reactions of +1 and +2
Chlorotitanium Ions With Isobutene;**
*Kneen, Kurt; Leroi, George E.; Allison,
John; Michigan State University, East
Lansing, MI.
- WPA 010 **Electrospray Mass Spectrometry (ESI-
MS) of Metal Chelates;** *Ross, Andrew
R.S.; Ikonomou, Michael, G.; Orians,
Kristin J.; University of British Columbia,
Vancouver, Canada.
- WPA 011 **Gas-Phase Actinide Ion Chemistry: Re-
actions of Th + and U + with CH₄ and
C₂H₆;** *Margalo, Joaquim; Leal, Joco
Paulo; Pires de Matos, Antsnio; Instituto
Tecnolsgico e Nuclear, Sacavim, Portu-
gal.
- WPA 012 **Gas-Phase Reactivity of Transition
Metal Cations with Atomic Species;**
- WPA 013 **Organometallic Distonic Ions:
+ FeC₆H₄;** *Xu, Young; Lee, Sam;
Freiser, Ben; Bauschlicher, Charles; Pur-
due University, West Lafayette.
- WPA 014 **Gas-Phase Isomeric Differentiation
Study of FeC₇H₇ + ;** *Xu, Young; Gar-
cia, Edna; Freiser, Ben; Bauschlicher,
Charles; Purdue University, West
Lafayette.
- WPA 015 **Experimental and Theoretical Studies
on Nb₆C₇ + ;** *Lee, Samuel; Kan,
Steven; Freiser, Ben S.; Department of
Chemistry, Purdue University, West
Lafayette, IN 47907, USA.
- WPA 016 **Generation and Reactivity of Yttrium-
Carbon Clusters;** *Kan, Steven Z.; Lee,
Sam A.; Freiser, Ben S.; Department of
Chemistry, Purdue University, West
Lafayette, IN 47907, USA.
- WPA 017 **FT-ICR Studies of the Structures and
Reactivities of Metal-Carbon Clusters;**
*Byun, Yong G.; Yeh, Chen-Sheng;
Afzaal, Sunia; Lee, Samuel A.; Kan,
Steven Z.; Xu, Young; Freiser, Ben S.;
Department of Chemistry, Purdue Uni-
versity, West Lafayette, IN 47907, USA.
- WPA 018 **Gas-Phase Ion-Molecule Reactions of
Lanthanide Ions with Crown Ethers;**
*White, Forest M.; Solouki, Touradj; Xin,
Tianpei; Marshall, Alan G.; National
High Magnetic Field Laboratory, Florida
State U., Tallahassee, FL.
- WPA 019 **Gas Phase Reactions of Pt + , Au + ,
and Hg + with Small Hydrocarbons;**
*Taylor, William; Rippy, Allyson;
**Babcock, Lucia; Linder, Christopher;
University of Central Arkansas, Con-
way; University of Georgia, Athens.
- WPA 020 **Glow Discharge / SIFT Studies of
Some Gas Phase Metal Ion Reactions;**
*Linder, Christopher; **Taylor, William;
Dalton, A. Leigh; Babcock, Lucia; Uni-
versity of Georgia, Athens, Ga 30602;
University of Central Arkansas, Con-
way, AR 72032.
- WPA 021 **Reactions of singly-charged transition
metal ions with cyclopentene;** *Ni, Jin-
song; **Harrison, Alex. G.; Department
of Chemistry, University of Toronto,
Toronto, Canada; Department of Chem-
istry, University of Toronto, Toronto,
Canada.
- WPA 022 **C₅H₈ isomer distinctions by metal ion
reactions;** *Ni, Jinsong; **Harrison, Alex.
G.; Department of Chemistry, University

- of Toronto, Toronto, Canada; Department of Chemistry, University of Toronto, Toronto, Canada.
- WPA 023 **Radiative association rate and bond strength of metal ion-neutral complexes;** *Ho, Yen-Peng; Dunbar, Robert C.; Department of Chemistry Case Western Reserve University.

Computer Applications

- WPB 024 **SIMION 3D Version 6.0;** *Dahl, David; Idaho National Engineering Laboratory.
- WPB 025 **MacSimion past, present and future;** *McGilvery, D. C.; Morrison, R. J. S.; Monash University, Victoria, Australia.
- WPB 026 **The Practical Application of Data Controlled Mass Spectral Analysis;** *Stahl, Douglas C.; Swiderek, Kristine M.; Davis, Michael T.; Lee, Terry D.; Beckman Research Institute of the City of Hope, Duarte, CA.
- WPB 027 **Possible use of a time domain signal inverse algorithm in FTICR-MS;** *Gorshkov, Michael V.; Kouzes, Richard T.; Battelle, Pacific Northwest Laboratory, Richland, WA 99352.
- WPB 028 **Homologous Series Plots: A New Slice Through the GC / MS Data Set;** *Dolnikowski, Gregory; **Smith, Brian; Jean Mayer USDA-HNRCA at Tufts University, Boston, MA; Spectros Associates, Northbridge, MA.
- WPB 029 **The Determination of Elemental Composition by Low Resolution MS / MS;** *Wang, Jia-shen; Clairol Inc.
- WPB 030 **USE OF PM3 MOPAC TO PREDICT PHOTOINDUCED H + -TRANSFER IN H-BONDED CLUSTERS;** *Gimon-Kinsel, Mary; Huang, Yong; Russell, David; Laboratory for Biological Mass Spectrometry, Texas A & M University.
- WPB 031 **Application of a Fuzzy Logic peak-finding algorithm for GC / MS Analysis;** *Sander, Peter; Bruker-Franzen Analytik GmbH, Bremen, Germany.
- WPB 032 **New Software Tools for the Analysis of High Resolution Mass Spectra;** *Price, John M.; Rockwood, Alan W.; Myers, James D.; Van Orden, Steven; Battelle, Pacific Northwest Laboratory, Richland Washington.
- WPB 033 **Processing MALDI-Time-of-Flight Data: A Maximun Entropy Approach;** Reynolds, David J.; *Gallagher, Richard T.; Scrivener, Elaine; Derrick, Peter J.; Department of Chemistry, University of Warwick, Coventry, CV4 7AL. UK.
- WPB 034 **Hybrid Neural Network for Mycobacterial Detection and Speciation by GC-MS;** *Herold, Christopher; Fitzgerald, Robert; Herold, David; **Lu, Taiwei; Zhao, Sean; Lerner, Jeremy; VA Medical Center -113, San Diego, CA 92161; Physical Optics Corp, Torrance, CA 90501-1821.
- WPB 035 **Evaluating EI Mass Spectral Library Search Results;** *Sparkman, David; O. David Sparkman & Associates, Antioch, CA.
- WPB 036 **Substructure Identification by Library Searching;** *Stein, Stephen E.; Tchekhovskoi, Dmitrii V.; NIST Gaithersburg, MD.
- WPB 037 **Sharing Corporate Mass Spectral Databases;** *Little, James L.; McSpadden, William M.; Eastman Chemical Company, Kingsport, TN.
- WPB 038 **Artificial Neural Networks for Identifying Components in Mixtures by MS;** *Lay, Jackson; **Darsey, Jerry; FDA-National Center for Toxicological Research; University of Arkansas at Little Rock, Department of Chemistry.
- WPB 039 **Hardware & Software Design Considerations for a Computer-Controlled HRMS;** *Cody, Robert B.; Makino, S.; Asada, T.; **Yoshidome, K.; JEOL USA, Inc. 11 Dearborn Road, Peabody, MA 01960; JEOL Ltd., Musashino 3-1-2, Akishima, Tokyo, Japan.
- WPB 040 **High-Performance FT-ICR Data System;** *Senko, Michael W.; Guan, Shenheng; Marshall, Alan G.; National High Magnetic Field Laboratory, Florida State U., Tallahassee, FL.
- WPB 041 **High Performance Data System for Ion Trap Mass Spectrometry;** *Overney, Gregor; **Hart, Kevin; Wise, Marc B.; Enke, Christie G.; Dept. of Chemistry, University of New Mexico, Albuquerque, NM 87131; Dept. of Chemistry, Oak Ridge National Lab, Oak Ridge, TN 37831.
- WPB 042 **PROGRAMMING THE TELEDYNE FILTERED NOISE FIELD SYSTEM;** *Clarke, Nigel J.; Todd, John F.J.; Hoekman, Don J.; The Chemical Laboratory, University of Kent, Canterbury, Kent, CT2 7NH, UK; Teledyne ET, 274 Terra Bella Av., Mountain View, CA 94043.
- WPB 043 **A HIGH SPEED DATA ACQUISITION FOR FAST GC-MS;** *Gilbert, Anthony; Atherton, Paul; Hanson, Stewart; Lu, Lin; **Preston, Andrew; Smith, Steve; Fisons Instruments VG Organic,

- Manchester, UK; University of Manchester, Manchester, UK.
- WPB 044 **Display and Manipulation of Three-Dimensional Plots of Ion Trap Data;** *Li, Rebecca; Hoekman, Don; Wilson, Ray; McHugh, Sean; Karr, Dane; Teledyne Electronic Technologies.
- WPB 045 **Interactive Setup and Control of Ion Trap Mass Spectrometry Experiments;** *Wilson, Ray; Hoekman, Don; McHugh, Sean; Li, Rebecca; Teledyne Electronic Technologies, Mountain View, CA.
- WPB 046 **Automating Mass Spectrometry with AppleScript and QuickKeys;** *Bonner, Ron; Burton, Lyle; **Mann, Matthias; Wilm, Matthias; PE Sciex Instruments, Toronto, Canada; EMBL, Heidelberg, Germany.
- WPB 047 **A New Mass Spectrometry Data Processing Program;** *Bonner, Ron; Burton, Lyle; PE Sciex Instruments, Toronto, CANADA.
- WPB 048 **Automating Pharmaceutical API / LC / MS / MS Quantitation;** *Wakefield, Michael; Weissenberg, Klaus; Finnigan MAT.
- WPB 049 **A New Multi-Vendor CLP-Like Report Generator for GC / MS Data;** *Patkin, Adam; The Perkin-Elmer Corporation, Norwalk, CT.
- WPB 050 **Automated Matrix Assisted Laser Desorption as a tool for QC applications;** *Humphrey, Paul; Dingley, David; Wight, Helen; Kratos Analytical Ltd.
- WPB 051 **Evaluation of TICFILT as a Software Used in LC / MS Analysis;** *Carrier, Alain; Zidarov, Dimo; Bertrand, Michel J.; University of Montreal, Montreal, Canada H3C 3J7.
- WPC 055 **The Effect of the Terminal Group on the TOF-SIMS Spectra of PDMS;** *Dong, Xia; Proctor, Andrew; Hercules, David; Department of Chemistry, University of Pittsburgh.
- WPC 056 **Application of ESI MS to the Analysis of Polysulfide Polymers;** *Buzy, Armelle; Mahon, Andrea; Kemp, Terry; Jennings, Keith; Department of Chemistry, University of Warwick, Coventry CV4 7AL, UK.
- WPC 057 **The Analysis of Polymer Additives by Tandem Mass Spectrometry;** *Jackson, Tony; Jennings, Keith; Scrivens, Jim; Department of Chemistry, University of Warwick, Coventry CV4 7AL, UK; ICI Materials Research Centre, PO Box 90, Wilton, Cleveland TS6 8JE, UK.
- WPC 058 **Average Mass and End-Group Information on Polymers Using MALDI and MS / MS;** *Jackson, Tony; Jennings, Keith; Scrivens, Jim; Department of Chemistry, University of Warwick, Coventry CV4 7AL, UK; ICI Materials Research Centre, PO Box 90, Wilton, Cleveland TS68JE, UK.
- WPC 059 **Direct Analysis of Polymer Compounds by Mass Spectrometry;** *Lattimer, Robert; BFGoodrich Research & Development Center, Brecksville, Ohio.
- WPC 060 **Pyrolysis Field Ionization Mass Spectrometry of Polyolefins;** *Lattimer, Robert; BFGoodrich Research & Development Center, Brecksville, Ohio.
- WPC 061 **CHARACTERIZATION OF MELAMINE COATING RESINS;** *Chang, Ted; Cytec Industries Inc., Stamford CT.
- WPC 062 **Characterisation of Cyclic PET Oligomers by LC-MS;** *Yates, Hilary; Scrivens, Jim; Hedley, Julie; Taylor, Mike; ICI Materials Wilton Cleveland England TS90 8JE.
- WPC 063 **LC-MS Characterisation of a Surfactant Complex Mixture;** *Yates, Hilary; Scrivens, Jim; Hedley, Julie; ICI Materials Wilton Cleveland England TS90 8JE.
- WPC 064 **Mass Spectrometry of Polyoxyalkylene Block Copolymer Surfactants;** *Kalinoski, Henry T.; Hargiss, Leonard O.; Shay, Brian J.; **Schuyt, P.J.W.; Unilever Research US, Edgewater, NJ, USA; Unilever Research Laboratory, Vlaardingen, The Netherlands.
- WPC 065 **Diffusion of argon in K3B polyimide and its carbon fiber laminates***; *Gray-
-
- Materials Characterization**
- WPC 052 **Mass Spectrometry as a Tool to Study Painted Art;** *Boon, Jaap J.; van der Doelen, Gisela; Pureveen, Jos; van Ocht, J.; van Grevenstein, A.; FOM Institute for Atomic and Molecular Physics, Amsterdam, The Netherlands; Stichting Restauratie Atelier Limburg, Maastricht, The Netherlands.
- WPC 053 **HPLC-FAB-MS and GCMS study of aromatic components of gum benzoin resins;** *Pastorova, Ivana; de Koster, Chris G.; Boon, Jaap J.; FOM Institute for Atomic and Molecular Physics.
- WPC 054 **GC / MS Analysis of Vegetal Adhesive Material from Archaeological Origin;** Delacotte, J.-M.; *Regert, M.; Rolando,

- son, Michael; McDonnell Douglas Corporation, St Louis MO.
- WPC 066 **The characterisation of commercial lubricant formulations;** *Scrivens, Jim; Yates, Hilary; Bunn, Alan; Tayler, Paul; Beckett, Malcolm; Taylor, Mike; Jennings, Richard; ICI Materials Wilton Cleveland England TS 90 8JE.
- WPC 067 **Transformation of Feedstock Molecules in FCC Studied by Mass Spectrometry;** *Qian, Kuangnan; Harding, Robert H.; Zhao, Xinjin; W.R. Grace & Co.-Conn., Research Division.
- WPC 068 **Quantitative Analysis of Reformulated Gasoline by Mass Spectrometry;** *Drinkwater, Donald; Nero, Vince; Texaco, R & D, Beacon, NY.
- WPC 069 **Characterization of Asphaltenes from Midway Sunset Crude Oil;** *Haas, George W.; Ellis, Leroy; Hunt, Jerry E.; Winans, Randall E.; Argonne National Laboratory.
- WPC 070 **Pyrolysis-Photoionization Mass Spectrometry;** *Bookwalter, Craig; Zoller, David; Johnston, Murray; University of Delaware.
- WPC 071 **The Accuracy of Chemical Type Analysis Using a Dynamic Batch Inlet System;** *Roussis, Stilianos, G.; Cameron, Andrew, S.; Research Department, Imperial Oil, Sarnia, Ontario, N7T 7M1.
- WPC 072 **Improving the Reproducibility of Pyrolysis MS Techniques;** *Roussis, Stilianos, G.; Fedora, Jim, W.; Research Department, Imperial Oil, Sarnia, Ontario, N7T 7M1.
- WPC 073 **Analysis of Pyrolysis Residues from Poly (vinyl alcohol);** *Pogue, Robert; Ackley, Kathryn; Majidi, Vahid; University of Kentucky.
- WPC 074 **TPD MS of Chemically Modified Ultrafine Oxides;** *Pokrovskiy, Valeriy; Institute for Surface Chemistry, Academy of Sciences, Kiev, UKRAINE.
- WPC 075 **Thermogravimetric Analysis-MS with Data Logging on a Teknivent Data System;** *Hileman, Fred; Grote, William; Johnson, Deborah; Tria, John; **Norberg, Peter; Monsanto Corporate Research, St. Louis, MO 63167; Peter Norberg Consulting, Inc., P.O. Box 9141, Richmond Hts. MO 63117.
- WPD 077 **Improved Performance of a Quadrupole Based-Glow Discharge Mass Spectrometer;** *Valiga, Robert E.; Duckworth, Douglas C.; Smith, David H.; Oak Ridge National Laboratory, Oak Ridge, TN 37831-6375.
- WPD 078 **Elemental Quantification Based on Secondary Species in the Glow Discharge;** **Goodner, Kevin L.; Eyler, John R.; Barshick, C. M.; Smith, David H.; Oak Ridge National Laboratory, Oak Ridge; University of Florida, Gainesville.
- WPD 079 **Reduced Mass Range Ion Trap MS for Atomic Ions;** *Barinaga, Charles J.; Eiden, Gregory C.; Koppenaal, David W.; **Hemberger, Philip H.; Pacific Northwest Laboratory (US DOE by Battelle Memorial Institute); Los Alamos National Laboratory.
- WPD 080 **Reducing Energy Dispersion in Plasma-Source Sector-Field Mass Spectrometry;** *Burgoyne, Thomas; Hieftje, Gary; Hites, Ronald; Indiana University, Bloomington.
- WPD 081 **Improvements in Operating Characteristics of a High Resolution ICP/MS;** Iwanaga, M.; *Kubota, E.; Otsuka, K.; **Musselman, B.; JEOL Ltd., 1-2 Musashino 3-chome, Akishima, Tokyo 196, Japan; JEOL USA, Inc., 11 Dearborn Road, Peabody, MA. 01960.
- WPD 082 **Insulator Surface Potential Measured by TOF SIMS;** *Guo, X. Q.; Short, R. T.; Oak Ridge National Laboratory, Oak Ridge, TN 37831-6365.
- WPD 083 **Resonant Laser Ablation - Thin Film and Multilayer Analysis;** *Allen, T. A.; **Gill, C. G.; Anderson, J. E.; Kelly, P. B.; Nogar, N. S.; University of California, Davis; Los Alamos National Laboratory, Los Alamos.
- WPD 084 **High sensitivity LC-combustion-IRMS based on a moving belt;** *Caimi, Richard J.; Brenna, J. Thomas; Cornell University.
- WPD 085 **LC Combustion Interface for High Precision Isotope Ratio Mass Spectrometry;** Brand, Willi; *Dobberstein, Peter; Finnigan MAT, Barkhausenstr. 2, 28197 Bremen, Germany.
- WPD 086 **Optical versus Mass Spectrometry: The Race for Fieldable Isotopic Analysis;** *Barshick, C.M.; Young, J.P.; Shaw, R.W.; Smith, D.H.; Ramsey, J.M.; Oak Ridge National Laboratory, Oak Ridge, TN.
- WPD 087 **Alumatrane Revisited: Distribution of Oligomeric Ions in EI, CI, and LSIMS;** *Bartlett, Michael; Burns, Scot; Bruce, A.; Los Alamos National Laboratory, CST-9, MS J514 Los Alamos, NM, 87545.

Inorganic, Elemental & Isotopic Ratios

- WPD 076 **A New, Compact Tandem Ion Source (GD-MIP) for Elemental Mass Spectrometry;** *Duan, Yixiang; Olivares, Jose

	David; **Busch, Kenneth; Dept. of Medicinal Chem., University of Utah, Salt Lake City; Dept. of Chemistry and Biochem., Georgia Tech., Atlanta.		
WPD 088	Characterization of Supported and Unsupported Transition Metal Complexes; *Bartlett, Michael; Bruce, David; **Busch, Kenneth; Thomas, Susan; White, Mark; Bertrand, J. Aaron; Dept. of Medicinal Chem., Univ. of Utah, Salt Lake City; Dept. of Chemistry and Biochem., Georgia Tech, Atlanta.	WPE 095	A comparison of fundamental principles and properties of ion traps; Engel-mohr, Peter; *Wanczek, Karl Peter; Institute of Inorganic and Physical Chemistry, University of Bremen.
		WPE 096	A new structure for a FT Ion Trap used in electrical and combined modes; Engel-mohr, Peter; *Wanczek, Karl Peter; Institute of Inorganic and Physical Chemistry, University of Bremen.
WPD 089	A STUDY OF THE CLUSTER ION DISTRIBUTION FROM METAL NITRATES USING PDMS; *Ferrell, William; Van Stipdonk, Michael; da Silveira, Enio; Schweikert, Emile; Center for Chemical Characterization and Analysis, Texas A & M University; Dept. of Physics, Pontificia Universidade Catlica.	WPE 097	Characterisation of a multi-purpose open endcap ICR-Cell; *Spiess, Iris; Kuhn, Florian; Wanczek, Karl-Peter; Institute of Inorganic and Physical Chemistry, University Bremen.
		WPE 098	Examples in Hierarchies of Optimally Triple Frequency Focused FTMS Traps; *Rempel, D. L.; Gross, M. L.; Washington University, St. Louis, MO.
WPD 090	Electrospray and FAB of Mixed-Valence Polynuclear Ru and Os Complexes; *Hamdan, Mahmoud; Curcuruto, Ornella; **Bortolini, Olga; Bignoz, C. Alberto; Glaxo Research Laboratories, Verona (Italy); Chemistry Department, Ferrara University, Ferrara (Italy).	WPE 099	Short-Bore Concentric Tube Source for Coupling HPLC to ES / FTICR; *Harper, C. J.; Drader, J. J.; Campbell, V. L.; Laude, D. A.; University of Texas at Austin.
		WPE 100	Experimental Effects of the Radial Electric Field in Open Cells; *Vartanian, V. H.; Laude, D. A.; University of Texas at Austin, Austin Texas.
WPD 091	Electrospray Ionisation of Polyoxoanions of W, Mo and Si in Aqueous Soln.; *Summerfield, Scott; Howarth, Oliver; Jennings, Keith; Department of Chemistry, University of Warwick, Coventry CV4 7AL, UK.	WPE 101	Investigation of Gas Phase Ion-Ion Reactions in an FTICR Trapped Ion Cell; *Torres, T. A.; Laude, D. A.; University of Texas at Austin.
		WPE 102	FTICR / TOF for Measuring Large Ion Populations in Penning Traps; *Schmidt, E. G.; Laude, D. A.; The University of Texas at Austin.
WPD 092	Study of the Stability of Metal Ion-Macrocyclic Complexes by ESI-MS / CID / MS; *Znamirovski, Calin G.; **Frutos, Dinorah; Enke, Christie G.; Michigan State University, East Lansing, Michigan, 48824-1322, USA; University of New Mexico, Albuquerque, New Mexico, 87131-1096, USA.	WPE 103	Improved Ion Injection in a Single Trap Electrode Cell for FTICR; *Anderson, J. S.; Torres, T. A.; Vartanian, V. H.; Laude, D. A.; University of Texas at Austin.
		WPE 104	Quadrupolar Excitation Efficiency in Non-Ideal FTICR Trapped Ion Cells; *Drader, J. J.; Hendrickson, C. L.; Campbell, V. L.; Laude, D. A.; The University of Texas at Austin.
WPD 093	Atmospheric Pressure Chemical Ionization of Novel Bismuth Compounds; *Yhard, G. Bradley *; Curtis, Jonathan M. *; Agocs, Lisa *; Burford, Neil *; *Dalhousie University, Halifax, Nova Scotia, B3H 4J3, Canada.; Institute for Marine Biosciences, NRC,1411 Oxford St., Halifax, Canada.	WPE 105	MALDI / FTICR Using Quadrupolar Excitation in a Single Trapped Ion Cell; *Anderson, J. S.; Laude, D. A.; University of Texas at Austin.
		WPE 106	ESI / FTICR Analysis of Protein Conformation; *Campbell, V. L.; Laude, D. A.; University of Texas at Austin.
Trapped Ions		WPE 107	A New Approach for Stabilizing Ion Radial Motion in FT-ICR; Vartanian, V. H.; *Laude, D. A.; University of Texas at Austin.
WPE 094	Comparison of ICR cells with open geometry for FT-ICR; *Kuhn, Florian; Spiess, Iris; Wanczek, Karl-Peter; Institute of Inorganic and Physical Chemistry, University of Bremen.	WPE 108	Facile Implementation of Quadrupolar Axialization in FTMS; *James, C. F.; National Institute of Mental Health.

- WPE 109 **Electron Bean Induced Axialization of Ions in FT-ICR;** Amster, Jon; *Easterling, Michael; University of Georgia, Athens GA.
- WPE 110 **Experimental and Theoretical Studies of Broadband Quad Excite in FT-ICR;** *Pitsenberger, Cynthia; Amster, I. Jonathan; University of Georgia, Athens.
- WPE 111 **Quadrupole Excitation Trapping during Electron Beam Events in ICR;** Hatcher, Joey; *Bartmess, John; Univ. of Tennessee, Knoxville.
- WPE 112 **Direct visualization of ions in an FT-ICR ion trap;** *Mitchell, Dale W.; Rockwood, Alan L.; Smith, Richard D.; Pacific Northwest Laboratory, Richland WA 99352.
- WPE 113 **Studies of Large Individual Ions by FTICR Mass Spectrometry;** *Chen, Ruidan; Bruce, James E.; Cheng, Xueheng; Dale, Mitchell W.; Hofstadler, Steven A.; Anderson, Gordon A.; Smith, Richard D.; Pacific Northwest Laboratory, Richland, WA 99352.
- WPE 114 **A New Dual Cell for Selective Ion Accumulation and Separation in FTICR / MS;** *Chen, Ruidan; Bruce, James E.; Cheng, Xueheng; Hofstadler, Steven A.; Anderson, Gordon A.; Rockwood, Alan L.; Udseth, Harold R.; Smith, Richard D.; Pacific Northwest Laboratory, Richland, Washington 99352.
- WPE 115 **Enhanced Selective Ion Accumulation with Dipolar Magnetron Excitation;** *Bruce, James; Anderson, Gordon; Chen, Ruidan; Cheng, Xueheng; Gale, David; Hofstadler, Steven; Schwartz, Brenda; Smith, Richard; Chemical Sciences Department, Pacific Northwest Laboratory.
- WPE 116 **Selective Ion Excitation and Isolation in Trapped-Ion Mass Spectrometry;** *Guan, Shenheng; Marshall, Alan G.; National High Magnetic Field Laboratory, Florida State U., Tallahassee, FL.
- WPE 117 **A Unified Description of Space Charge Effects in FT - ICR;** *Mitchell, Dale W.; Smith, Richard D.; Pacific Northwest Laboratory, Richland WA 99352.
- WPE 118 **Minimization of Frequency Shifts for Improved Mass Accuracy in FT-ICR MS;** *Gillig, Kent; Bluhm, Brian; Solouki, Touradj; Russell, David; Texas A & M University, College Station Tx.
- WPE 119 **FT-ICR Mass Spectral Analysis of Unevenly-Sampled Biomolecule Data;** Guan, Shenheng; *Senko, Michael W.; Huang, Yulin; Marshall, Alan G.; McLafferty, Fred W.; National High Magnetic Field Laboratory, Florida State U., Tallahassee, FL; Dept. of Chemistry, Cornell University, Ithaca, NY.
- WPE 120 **Optically Detected Electron Spin Resonance of Trapped Mass-Selected Ions;** *Li, Guo-Zhong; Guan, Shenheng; **Dalal, Nar S; Marshall, Alan G.; National High Magnetic Field Laboratory, Florida State U., Tallahassee, FL; Department of Chemistry, West Virginia University, Morgantown, WV.
- WPE 121 **A Combined rf Quadrupole / Magnetic Ion Trap for FT-ICR MS;** *Huang, Yulin; Li, Guo-Zhong; Guan, Shenheng; Marshall, Alan G.; National High Magnetic Field Laboratory, Florida State U., Tallahassee, FL.
- WPE 122 **Delayed Photofragmentation of Size Selected Gold and Silver Cluster Ions;** Lindinger, M.; Dietrich, G.; Kluge, H.-J.; **Lötzenkirchen, K.; *Schweikhard, L.; Walther, C.; Ziegler, J.; Inst. f. Physik, J. Gutenberg-Universitdt, D-55099 Mainz, Germany; Inst. f. Kernchemie, J. Gutenberg-Universität, D-55099 Mainz, Germany.
- WPE 123 **Instabilities of Ion Motions in Ion Cyclotron Resonance Traps;** *Schweikhard, L.; Ziegler, J.; Bopp, H.; **Lötzenkirchen, K.; Inst. f. Physik, J. Gutenberg-Universität, D-55099 Mainz, Germany; Inst. f. Kernchemie, J. Gutenberg-Universität, D-55099 Mainz, Germany.
- WPE 124 **Single- and Two-Photon Fragmentation of Stored Gold Cluster Ions;** Walther, C.; Becker, St.; Dietrich, G.; Kluge, H.-J.; Lindinger, M.; **Lötzenkirchen, K.; *Schweikhard, L.; Ziegler, J.; Inst. f. Physik, J. Gutenberg-Universität, D-55099 Mainz, Germany; Inst. f. Kernchemie, J. Gutenberg-Universität, D-55099 Mainz, Germany.
- WPE 125 **Substituent distribution analysis in O-methyl celluloses by MALDI-FT-ICR-MS;** *De Koster, Chris G.; Duursma, Marc C.; Arisz, Peter W.; Heeren, Ron M.A.; Boon, Jaap J.; FOM institute for Atomic and Molecular Physics.
- WPE 126 **Characterisation of electrosprayed polymers with MALDI-FT-ICR-MS;** *Heeren, Ron M.A.; van Rooij, Gerard J.; Duursma, Marc; de Koster, Chris G.; Boon, Jaap J.; FOM Institute for Atomic and Molecular Physics.
- WPE 127 **FT / MS Analysis of Block and Random Polyester-Urethane Polymers;** *Ludicky, Robert; Morton International, Woodstock IL.

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- WPF 128 **NIST SRMS AS REFERENCE MATERIALS FOR HRMS PCDD / PCDF AND CP-PCB METHODS;** *Chambers, Laura; Gardinali, Piero; Wade, Terry; Chambers, Hank; GERG at Texam A & M University.
- WPF 129 **Halogenated Aromatic Compounds in Air Particulates SRM 1648 & 1649;** *Xu, Ming; **Kim, Hyun Sik; Guan, Shenheng; Marshall, Alan G.; Dougherty, Ralph C.; Dept. of Chemistry, Florida State University, Tallahassee, FL; National High Magnetic Field Lab, Florida State U., Tallahassee, FL.
- WPF 130 **A New Approach for the Analysis of Volatiles in Complex Matrices;** *Barshick, Stacy-Ann; Buchanan, Michelle; Guerin, Michael; Oak Ridge National Laboratory, Oak Ridge, TN.
- WPF 131 **EPA Method 8270 (semivolatiles) using a GC / Ion Trap Spectrometer;** *Barshick, Stacy-Ann; Griest, Wayne; Worthy, Suzanne; Oak Ridge National Laboratory, Oak Ridge, TN.
- WPF 132 **Factors Affecting Membrane Introduction Mass Spectrometry;** *Ohorodnik, Susan; Callahan, John; Anderson, Mark; McElvany, Steve; Naval Research Laboratory, Washington DC.
- WPF 133 **Direct Sampling Ion Traps vs. GC / MS for Monitoring VOCs in Groundwater*;** *Wise, Marcus; Merriweather, Roosevelt; Guerin, Michael; Oak Ridge National Laboratory, Oak Ridge, TN.
- WPF 134 **RAPID SAMPLING FOR RAPID ANALYSIS: A NEW METHOD FOR VOCs IN DRINKING WATER;** *Gardner, Ben; Johnson, Jennifer; **Artaev, Viatcheslav; Sparkman, O. David; Holland, John; Meridian Analytical Systems, Inc.; Michigan State University.
- WPF 135 **Monthly Variations of Haloacetic Acids in Drinking Water by GC / MS;** *Benoit, Frank M.; Williams, David T.; LeBel, Guy L.; Health Canada.
- WPF 136 **Determination of Haloacetic Acids in Drinking Water by Electrospray LC / MS;** *Kryak, David D.; Behymer, Thomas D.; U. S. Environmental Protection Agency, Cincinnati OH 45268.
- WPF 137 **Analysis of VOCs in water at the Parts-per-Quadrillion Level using MIMS;** *Bauer, Scott; Bauer, Jan; MIMS Technology Incorporated.
- WPF 138 **Analysis of Pesticide Residues in Drinking Water using Megaflow ESI;** *Rontree, John; Lowes, Steve; Claereboudt, Jan; Ackermans, P.; Van Hoof, F.; Fisons Instruments VG Organic; Laboratorium Antwerpse Waterwerken.
- WPF 139 **Formation of Organochlorine Compounds during Water Chlorination;** *Lebedev, A.T.; Moshkarina, N.A.; Brodsky, E.S.; Klujev, N.A.; Petrosyan, V.S.; Moscow State University.
- WPF 140 **Multispectral Identification of Ozonation By-products in Drinking Water;** *Richardson, Susan D.; Thruston, Jr., Alfred D.; Collette, Timothy W.; **Patterson, Kathleen S.; Lykins, Jr., Benjamin W.; U.S. Environmental Protection Agency, Athens, GA 30605; U.S. Environmental Protection Agency, Cincinnati, OH 45268.
- WPF 141 **Identification of Brominated Organics in Ozonated Drinking Water;** *Thruston, Jr., Alfred D.; Richardson, Susan D.; Collette, Timothy W.; **Patterson, Kathleen S.; Lykins, Jr., Benjamin W.; U.S. Environmental Protection Agency, Athens, GA 30605; U.S. Environmental Protection Agency, Cincinnati, OH 45268.
- WPF 142 **Isotope Ratio Monitoring for Stable Isotope Analysis on CH₄ and N₂O in Air;** *Brand, Willi A.; Seedorf, Ronald; Finnigan MAT, Barkhausenstr.2, 28197 Bremen, Germany.
- WPF 143 **Evaluation the Air-Quality in Mass Spectrometry Labs. by SPTD / GC / MS;** Anren, Hu; *Jentaie, Shiea; Dept. of Chemistry, Nat'l Sun Yat-sen Univ., Kaohsiung, Taiwan 804.
- WPF 144 **Monitoring airborne benzene concentrations while driving a van in traffic;** *Davoli, Enrico; Ferrari, Stefano; Leone, Anna; Stramare, Luca; Cappellini, Luigi; Moggi, Marco; Fanelli, Roberto; Leonardi, Alfredo; Istituto di Ricerche Farmacologiche Mario Negri.
- WPF 145 **GC-MS-MS a novel approach for monitoring the bacterial load in air;** *Krahmer, Mark; Fox, Alvin; Fox, Karen; USC School of Medicine, Micro and Immun Dept, Columbia, SC.
- WPF 146 **Transfer Line on MS Sampling and Analysis of VOCs in Air;** *Thompson, Cyril; Wise, Marcus; Guerin, Michael; Oak Ridge National Laboratory.
- WPF 147 **MONITORING TRACE CONTAMINANTS IN AIR VIA ION TRAP MASS SPECTROMETRY;** *Palmer, Peter T.; **Karr, Dane; Pearson, Richard; Valero,

- Gustavo; Wong, Carla; NASA-Ames Research Center, Moffett Field, CA; Tele-dyne Electronic Technologies, Mountain View, CA.
- WPF 148 **Air Analysis for VOCs: Tenax Collection vs. On-Line Membrane Sampling;** *Cisper, M.E.; Gill, C.G.; Kok, G.L.; Hemberger, P.H.; Los Alamos National Laboratory, Los Alamos, NM; National Center for Atmospheric Research, Boulder, CO.
- WPF 149 **Characterization of Volatile Organic Compounds by Thermal Desorption-GC-MS;** *Ma, Cheng-Yu; Skeen, Todd T.; Dindal, Amy B.; Higgins, Cecil E.; Jenkins, Roger A.; Oak Ridge National Laboratory, Oak Ridge, TN, 37831-6120.
- WPF 150 **Analysis of Air Samples from Polypropylene Film Plants using Thermal Desorp;** *Chuang, C.H. William; Arnold, Elizabeth; Roy, Tim; Stonybrook Laboratories Inc. P.O. Box 1029, Princeton, NJ 08543.
- WPF 151 **Volatile Organic Compound (VOC) Analysis in Blood Using Spray Extraction;** *St-Germain, Francois; Vachon, Benoit; Brunet, Julie; **Mamer, Orval; Des Rosiers, Christine; Montgomery, Jane; University of Montreal, Montreal; McGill University, Montreal.
- WPF 152 **A Study of Semi-Volatile Organic Emissions of Polymer Combustion by GC / MSD;** *Carlson, Joel; Dunayevskiy, Yuriy; Atal, Ajay; Panagiotou, Thomai; Vouros, Paul; Levendis, Yiannis; Northeastern Univ, Dept. of Chem., Boston, MA 02115; Northeastern Univ. Dept. of Mech. Eng., Boston, MA 02115.
- WPF 153 **The Semivolatile By-Products Produced by Continuous Polymerization;** *Welch, Kenneth J.; S. C. Johnson Wax, Racine, WI 53403-2236.
- WPF 154 **STRATEGIES FOR IDENTIFICATION OF OFFGASSED VOLATILE ORGANIC COMPOUNDS;** *Yang, Lily; Leano, Hector; Martin, Millie; Limero, Thomas; James, John; KRUG Life Sciences, Inc., Houston, TX 77058; Biomedical Operation and Research Branch, NASA/Johnson Space Center, Houston.
- WPF 155 **Electrospray Ionization and Tandem Mass Spectrometry of Dyes;** *Fencl, Jennifer B.; Glush, Gary L.; **Voyksner, Robert D.; University of North Carolina at Chapel Hill; Research Triangle Institute, Research Triangle Park.
- WPF 156 **Analysis of Surfactants and Their Metabolites by HPLC-IS-MS and MS-MS;** *Raffaelli, Andrea; Pucci, Sergio; Campolmi, Laura; Salvadori, Piero; Centro CNR Macromolecole Stereordinate ed Otticamente Attive, Pisa, Italy; Dipartimento di Chimica e Chimica Industriale, Pisa, Italy.
- WPF 157 **Determination Surfactants In Water by LC and LC-MS;** *Scullion, Simon; Clench, Malcolm; Cooke, Michael; Environmental Research Centre, Sheffield Hallam University, Sheffield UK.
- WPF 158 **Biodegradation Kinetics and Pathways;** *Morrall, Stephen W.; Lawrence, David L.; Federle, Thomas W.; The Procter & Gamble Co., Cincinnati, OH.
- WPF 159 **Detection of Adsorbed Atmospheric Contaminants Using Static SIMS;** *Groenewold, Gary; Harrison, Evan; Delmore, James; Ingram, Jani; Appelhans, Anthony; Dahl, David; Idaho National Engineering Laboratory, Idaho Falls, ID 83415-2208.
- WPF 160 **DETERMINATION OF RADIATION STABILITY OF CROWN ETHERS;** *CAMPBELL, JAMES A.; GRANT, KAREN E.; WESTER, DENNIS W.; ABASHKIN, V.M.; JOHNSTON, PAUL F.; PACIFIC NORTHWEST LABORATORY, RICHLAND, WA.
- WPF 161 **GC / MS Analyses of Hanford Waste Tank Vapors Using SUMMA• Canisters;** *Lucke, Richard B; McVeety, Bruce D; Klinger, George S; Clauss, Therese W; Fruchter, John S; Goheen, Steve C; Pacific Northwest Laboratory, P.O. Box 999 Richland, WA 99352.
- WPF 162 **MASS SPECTROMETRY ANALYSIS OF TANK WASTES AT THE HANFORD SITE;** *CAMPBELL, JAMES A.; LUCKE, RICHARD B.; MONG, GARY M.; CLAUSS, SCOTT A.; PACIFIC NORTHWEST LABORATORY, RICHLAND, WA.
- WPF 163 **GC / MS Method for the Chemical Speciation of Arsenic and Selenium Compounds;** *Cameron, Douglas; Brozovich, Tara; Watts, Heath; Wang, Jin; Montana Tech, Butte, MT.
- WPF 164 **Organoarsenic and Organotin Speciation by Ionspray-MS-MS and LC-MS-MS;** *Corr, Jay J.; Siu, K.W. Michael; SCIEX, Thornhill, Ontario, L3T 1P2, Canada.
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- WPG 165 **Quantitation of a CCK Ligand Using LC / MS / MS on Traps and Quadrupoles;** *Moseley, Arthur; Tippin,

- Tim; Hart, Robert; St. Claire, Bob; **Schwartz, Jay; Uhrich, Mark; Glaxo Research Institute; Finnigan-MAT.
- WPG 166 **Concomitant Detection of Tazarotene and Three Metabolites from Human Urine;** *Luo, Wendy; Matsumoto, Richard; Tang-Liu, Diane; Breau, Alan; Allergan, Inc. Irvine, CA 92713.
- WPG 167 **Quantification of Dofetilide and its N-desmethyl metabolite in Human Serum;** *Schneider, Rick; Fouda, Hassan; Central Research Division, Pfizer Inc, Groton, CT 06340.
- WPG 168 **Rapid Pharmaceutical Method Development by API-LC / MS / MS Techniques;** *Henion, Jack; Bennett, Patrick; Li, Lily Y.-T.; Wu, Henry Y.; Perkins, John; Campbell, Dale; Mulvana, Dan; Zhao, Jamie; Advanced BioAnalytical Services, Ithaca, NY 14850.
- WPG 169 **Measurement of CO₂ Exchange Rates in Transferrin by Mass Spectrometry;** *Brown, Todd; Hileman, Fred; **Harris, Wes; Monsanto Corporate Research, St. Louis, MO 63167; University of Missouri-St. Louis, Chemistry Department, St. Louis, MO 63121.
- WPG 170 **Analysis of 2-Butoxyethanol and Metabolites in Human Urine by GC & ESI / MS;** *Markham, Dan A.; Bartels, Micheal J.; Corley, Richard A.; **Rettenmeier, Albert W.; The Dow Chemical Company, Midland MI; The University of Tübingen, Tübingen, Germany.
- WPG 171 **Evaluation of Nalmefene Metabolism in Rats and Dogs Using Thermospray LC / MS;** *Mathur, Chandra; Murthy, Satya S.; Kvalo, Loretta T.; Wilhelm, Jeffrey A.; OHMEDA PPD Inc., Murray Hill, NJ 07974.
- WPG 172 **Quantitation of Ritalin and Ritalinic Acid in Human Plasma by API LC / MS / MS;** *Cassidy, Ken C.; Matassa, Luca C.; NOVAMANN (Ontario) Inc. 5540 McAdam Rd., Mississauga ON, Canada L4Z 1P1.
- WPG 173 **Automated LC / ESI / MS / MS Quantitation of a Phospholipid Drug in Human Plasma;** *Hamilton, Brenda; Graham, Elizabeth; Abolin, Craig; **White, Robert; Oglesby, Thomas; Sandoz Research Institute; Taylor Technology, Inc.
- WPG 174 **Ultra Trace LC / MS / MS Determination of Reserpine in Plasma;** **Anderson, Melissa; *Wachs, Timothy; Henion, Jack; Cornell University, Ithaca, NY 14850; Monsanto, St. Louis, MO 63167.
- WPG 175 **Lovastatin and Hydroxy-acid Lovastatin in Dog Plasma via LC-APCI / MS / MS;** *Korfmacher, Walter A.; Lapiguera, Amelia P.; Lin, Chin-Chung; **Langevin, Carolyn N.; Oglesby, Thomas D.; Schering-Plough Research Institute, Kenilworth, NJ; Taylor Technology, Inc., Princeton, NJ.
- WPG 176 **LC / MS / MS QUANT. OF LOVAS-TATIN & ITS HYDROXY ACID IN MOUSE & RAT PLASMA;** *Wu, Henry, Y.; Henion, Jack; Zhao, Jamie; Korfmacher, Walter A.; Lin, C.C.; Advanced BioAnalytical Services, Inc., Ithaca, NY 14850; Schering-Plough Research Institute.
- WPG 177 **QUANTITATION OF LTE₄ IN HUMAN URINE BY ION SPRAY LC / MS / MS;** *Wu, Henry Y.; Li, Lily Y.-T.; Henion, Jack; Krol, George J.; Advanced BioAnalytical Services, Ithaca, NY 14850; Miles, Inc.
- WPG 178 **Automation of Rapid, High Sensitivity Pharmacokinetic Assays by LC / MS / MS;** *Stoney, Ken; Nugent, Kerry; **Land, Adrian P.; Bier, Mark E.; Schwartz, Jae; Wheeler, Kevin; Michrom BioResources, Auburn, CA; Finnigan MAT, San Jose, CA.
- WPG 179 **Semi-automated Electrospray LC / MS / MS Quantitation of CGS 20286A in Plasma;** *Hayes, Michael J.; Joshi, Jill C.; Carlsen, Steve; Powell, Mark L.; Ciba Pharmaceuticals, Research Dept. Summit NJ 07901.
- WPG 180 **Quantitation of Cefoxitin in plasma by LC / MS Negative Ion Electrospray;** *Zamecnik, Jiri; Florio, Eugene; Defence and Civil Inst. of Env. Medicine, Toronto, Ontario.
- WPG 181 **Application of Ionspray Ionization Quantitation of Guaifenesin;** *Winslow, L. D.; Schorno, Karl S.; Kansas City Analytical Services, Shawnee, Kansas.
- WPG 182 **Quantitative Determination of Vinblastine in Plasma using LC-APCI-MS;** *Ramirez, Jackie; Harder, Scott; Ratain, Mark; Stiller, Steven W.; **Ogan, Kenneth; Dept. Oncology/Hematology, Univ. Chicago, Chicago, IL; Hitachi Instruments, Inc., Danbury, CT.
- WPG 183 **Determination of Novel Thrombin Inhibitors in Animal Plasma by LC / API-MS;** *White, Dineen J.; Russell, John W.; Wang-Iverson, David; Bristol-Myers Squibb PRI, Plainsboro, New Jersey USA; Bristol-Myers Squibb PRI, Wallingford, Connecticut USA.
- WPG 184 **LC / MS / MS Method for the Determination of Nicotine & Cotinine in Plasma;** *Xu, Allan; Havel, Jim; Pe-

- tersen, Mary; Hulse, James; Harris Laboratories, Inc. Lincoln, NE.
- WPG 185 **Tetracyclines in Honey, Eggs and Animal Tissues by ESI MS and MS / MS;** Snider, Neil S.; *Malis, Greg M.; Agriculture and Agri-Food Canada, Lab Services Division, Ottawa, ON, Canada.
- WPG 186 **Determination of a 4-Azasteroid in Serum Using Negative Ion APCI LC / MS;** *Halm, Kathy; Lloyd, Thomas; Moss, M. Lee; Glaxo Research Institute, Research Triangle Park.
- WPG 187 **Determination of a 5-HT receptor agonist by LC-APCI-MS-MS;** *Pleasant, Stephen; Fraser, Ian; Allanson, John; Jones, Anne; Wellcome Research Laboratories, Beckenham, Kent UK.
- WPG 188 **Quantitative Analysis of Tirilazad Mesylate in Plasma by APCI / MS-MS;** *Hauer, Michael J.; Moore, Theresa A.; Steenwyk, Rick C.; Bombardt, Paul A.; Pearson, Paul G.; The Upjohn Company.
- WPG 189 **GC / MS and LC / MS Confirmation of Malachite Green Metabolites in Catfish;** *Turnipseed, Sherri; Roybal, Jose; Hurlbut, Jeff; Long, Austin; Food and Drug Administration, Denver CO.
- WPG 190 **ESI-MS Analysis of Bioactive Isoleukotrienes;** *Harrison, Kathleen; Murphy, Robert C.; National Jewish Center, 1400 Jackson St., Denver, CO 80206.
- WPG 191 **LC-ESI-MS / MS of polyamines and basic amino acids;** *Feistner, Gottfried J.; Beckman Research Institute of the City of Hope.
- WPG 192 **LC / LC / MS / MS ANALYSIS OF HUMAN PLASMA FOR A STICKY PEPTIDE;** *Li, Lily Y.-T.; Zhao, Jamie; Henion, Jack; Newman, Michael; Advanced BioAnalytical Services; Cortech, Inc.
- WPG 193 **Detection of the Endogen NO Gas from Living Animals by Mass Spectrometry;** Delacotte, J.-M.; Faye, T.; *Regert, M.; Rolando, C.; Sablier, M.; Ecole Normale Supérieure, Paris, FRANCE.
- WPG 194 **MACROMOLECULE ISOTOPE-RATIO MEASUREMENTS WITH HPLC / CRIMS;** *Osborn, Blaire L.; Abramson, Fred P.; George Washington University, Washington, D.C. USA.
- WPG 195 **QUANTITATIVE ASPECTS OF MASS SPECTROMETRIC IMMUNOASSAY;** *Nelson, Randall W.; Krone, Jennifer R.; Lewis, J. Kathleen; Williams, Peter; Dept. of Chemistry, Arizona State University, Tempe, AZ.
- WPG 196 **The Analysis of Flunixin Residues in Animal Tissues by NICI-GC-MS;** *Kwok, David; Chow, Pauline; Young, Larry; Mori, Brian; Health Protection Branch, Health Canada.
- WPG 197 **GC / MS Determination of Perillyl Alcohol Metabolism After Oral Dose in Dog;** *Phillips, Lawrence R.; Supko, Jeffrey G.; Malspeis, Louis; Lab Pharm Chem/DTP/DCT/National Cancer Institute Frederick, Maryland.
- WPG 198 **Positive chemical ionisation GC-MS analysis of nicotine and continine;** *Loftus, Neil; Skarping, Gunnar; Dalene, Marianne; Speakman, Alison; Bukowski, Nick; Fisons Instruments VG Organic, Manchester, UK; University Hospital, Lund, Sweden.
- WPG 199 **Analysis of anagrelide in human plasma by GC / ECNCI MS;** *Yeola, Suresh N.; Saleh, Samir A.; Sanchez, Stephanie C.; Kambouris, Sara J.; Chaudhary, Ajai K.; Migdalof, Bruce H.; Blair, Ian A.; Vanderbilt University, Nashville TN.; Roberts Pharmaceutical Corporation, Eatontown, NJ.
- WPG 200 **QUANTITATIVE DETERMINATION OF ZK 118372 IN HUMAN PLASMA USING NCI-GC / MS;** *BRUDNY-KLOEPPEL, Margarete; GUENTHER, Clemens; WEISS, Christian; Institute of Pharmacokinetics, SCHERING AG, Berlin - GERMANY.
- WPG 201 **Quantitation of Odd-Numbered Long Chain Fatty Acids in Red Cell Membranes;** *Giordano, G.; Burlina, A.; Magarotto, M.; Edini, C.; Zacchello, F.; Department of Pediatrics, University of Padova, Padova, Italy.
- WPG 202 **A Novel Approach for Analysis of Fadrozole Pseudoracemates in Human Plasma;** *Iannucci, Robert; Linberg, Leonid; Powell, Mark; Ciba Pharmaceuticals, Summit.

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- WPH 203 **Sonic Spray Ionization Method for API Mass Spectrometry;** *Hirabayashi, Atsumu; Sakairi, Minoru; Takada, Yasuaki; Koizumi, Hideaki; Central Research Laboratory, Hitachi, Ltd., Kokubunji, Tokyo 185, Japan.
- WPH 204 **Electrospray LC / MS With Orthogonal TOFMS and Ion Trap TOFMS;** *Purves, Randy; Li, Liang; Dept. of Chemistry, University of Alberta, Edmonton, AB Canada T6G 2G2.

- WPH 205 **Sensitivity Advances In Electrospray FTMS;** *Kruppa, Gary; Stacey, Catherine; Speir, J. Paul; **Whitehouse, Craig; Laukien, Frank; Bruker Analytical Systems Inc, Billerica, MA; Analytica of Branford, Branford, CT.
- WPH 206 **High Sensitivity Electrospray With A Fourier Transform Mass Spectrometer;** *Stacey, Catherine; Kruppa, Gary; Spier, J. Paul; **Mann, Matthias; Bruker Analytical Systems Inc, Billerica, MA; European Molecular Biology Laboratories, Heidelberg, Germany.
- WPH 207 **Unusual Methods of Ion Detection;** *Siuzdak, Gary; Bothner, Brian; Chang-Ming, Chang; Yeager, Mark; Hoey, Kenway; The Scripps Research Institute, La Jolla.
- WPH 208 **Reduction of Ambient Air Contaminants;** Aebi, Beat; *Henion, Jack; Analytical Toxicology, Cornell University, Ithaca, NY, 14850.
- WPH 209 **Pulsing Electrospray and Selecting Ions from Electrospray by Ion Mobility;** **Li, Guo-Zhong; Wang, Weimin; Kim, Tamen; *Moore, Robert B.; Foster Radiation Laboratory, McGill University, Montreal; National High Magnetic Field Laboratory, Florida State Univ., Tallahassee.
- WPH 210 **Achieving High Sensitivity LC/MS with an API-Ion Trap Mass Spectrometer;** *Habibi-Goudarzi, Sohrab; Henion, Jack; **Duffin, Kevin, L.; Hileman, Fred D.; Analytical Toxicology, Cornell University, Ithaca, NY; Analytical Sciences Center, Monsanto Co., St. Louis, MO.
- WPH 211 **Capillary, Multicapillaries or Porous Tube for Electrospray Ion Sources;** *Beaugrand, C.; Charbonnier, F.; Rolando, C.; Sablier, M.; Saru, F.; Ecole Normale Supérieure, Paris, FRANCE.
- WPH 212 **IONSPRAY: TO SPLIT OR NOT TO SPLIT?;** *Goodwin, R. Mike; Murphy, A. Tony; Lindsay, Tom J.; Gillespie, Todd A.; Eli Lilly and Co., Indianapolis, IN.
- WPH 213 **Transport of Electrospray Particles through the Interfaces;** *Bondarenko, Pavel; Macfarlane, Ronald; Department of Chemistry, Texas A & M University, College Station, TX, 77843.
- WPH 214 **Ion Distribution of Electrospray and Efficiency of Transferring Ions;** Wang, Weimin; **Li, Guo-Zhong; Kim, Tamen; *Moore, Robert B.; Foster Radiation Laboratory, McGill University, Montreal; National High Magnetic Field Laboratory, Florida State Univ., Tallahassee.
- WPH 215 **Stability of a Liquid Jet Emerging from an Electrospray Cone-Jet;** *Sheehan, Edward; **Willoughby, Ross; Chem-Space Associates, Inc., Pittsburgh, PA; Chem-Space Associates, Inc., Pittsburgh, PA.
- WPH 216 **Secondary Droplet and Ion Formation in Electrospray: The Teardrop Model;** *Sheehan, Edward; **Willoughby, Ross; Chem-Space Associates, Inc., Pittsburgh, PA; Chem-Space Associates, Inc., Pittsburgh, PA.
- WPH 217 **Role of Peptide Structure in the Production of Ions from Charged Droplets;** *Downard, Kevin; Biemann, Klaus; Massachusetts Institute of Technology, Cambridge MA, U.S.A.
- WPH 218 **Theory and Practice of Creating a Universal Electrospray Calibration File;** *Whitehouse, Craig M.; Haren, Patrick; Andrien, Bruce; Analytica of Branford Inc., Branford, CT.
- WPH 219 **Tuning Parameters: Their Dominant Role in Electrospray Ion Intensities;** *Cunniff, John; Vouros, Paul; Chemistry Dept. and Barnett Institute. Northeastern Univ. Boston.
- WPH 220 **The Characterization of m/z Deviates and Molecular Mass Uncertainty;** *Juneau, Paul L.; Giordani, Anne B.; Pyne, David A.; Parke-Davis Pharm. Res., Div. of Warner-Lambert Co., Ann Arbor MI 48105.
- WPH 221 **Chemical Redox Reactions in ES-MS: Study of Electrode Reactions;** *Zhou, Feimeng; Van Berkel, Gary; Oak Ridge National Laboratory.
- WPH 222 **Electrochemistry Combined On-line with Electrospray Mass Spectrometry;** *Van Berkel, Gary; Zhou, Feimeng; Oak Ridge National Laboratory.
- WPH 223 **Formation of Protonated Ions from Acidic Species at High pH in Electrospray;** *Smith, Richard W.; Department of Chemistry, McMaster University.
- WPH 224 **Electrospray Ionization, Maximum Charge States to Multiplexing;** *Schnier, Paul D.; Williams, Evan R.; University of California, Berkeley.
- WPH 225 **Protein Cations from Basic Solutions with an API III and an API 100.;** *Le Blanc, J.C. Yves; Shushan, Bori; **Siu, K.W. Michael; Guevremont, Roger; SCIEX, 55 Glen Cameron Road, Thornhill, Ontario, Canada, L3T 1P2; National Research Council, IERT, Montreal Road, Ontario, Canada, K1A 0R6.
- WPH 226 **Effects of Organic Solvents on Aerosol MALDI Ion Signal;** *Beeson, Michelle

- D.; Wei, Xiaona; Russell, David H.; Laboratory for Biological Mass Spectrometry, Texas A & M University.
- WPH 227 **Analyzing Thermally Labile Compounds in ESI Sources with Heated Capillaries;** *Kleintop, Brent; Lim, H.K.; **Oglesby, Thomas; Chan, Kelvin; Sisenwine, Samuel; Wyeth-Ayerst Research, Princeton, NJ; Taylor Technology, Princeton, NJ.
- WPH 228 **Peptide Mixture Analysis by Combining Electrospray-CID-MS and Chemometrics;** *Cusworth, III, William; Turecek, Frantisek; University of Washington, Seattle, WA.
- WPH 229 **Ion Solvation in Electrospray Generated SDS Clusters;** *Gao, Q; Zhang, J; Harms, A. C.; Udseth, H. R.; Rockwood, A. L.; Sherman, M. G.; Smith, R. D.; Pacific Northwest Laboratory, Richland, WA 99352.
- WPH 230 **Rapid Molecular Weight Determination Using Electrospray Ionization;** *Gedamke, Rich; DiDonato, Gerald; Hail, Mark; Lee, Mike; Bristol-Myers Squibb Company.
- WPH 231 **Adventures in the Positive Ion ESIMS of Acids and Neutral Molecules;** *Shah, Nikhil; Fitch, William; Affymax Research Institute.
- WPH 232 **Electrospray Ionization of Neutral Complexes from Non-Polar Solvents;** *Cheng, Xueheng; Gao, Quanyin; Smith, Richard D.; Simanek, Eric E.; Mammen, Mathai; Whitesides, George M.; Pacific Northwest Laboratory, Richland, WA 99352; Harvard University, Cambridge, MA.
- WPH 233 **Electrospray Mass Spectra of Less Polar Compound Dissolved in n-Hexane;** Wang, Wen-shyang; Huang, S-wan; *Shiea, Jentaie; Dept. of Chemistry, Nat'l Sun Yat-sen Univ., Kaohsiung, Taiwan 804.
- WPH 234 **Low Temperature Electrospray Mass Spectra of Thermally Unstable Compound;** Wen-Shyang, Wang; Chin-Hsiung, Wang; *Jentaie, Shiea; Dept. of Chemistry, Nat'l Sun Yat-sen Univ., Kaohsiung, Taiwan 804.
- WPH 235 **Multi-channel ESI source for directly coupling to HPLC;** Chinghsung, Wang; *Jentaie, Shiea; Dept. of Chemistry, Nat'l Sun Yat-sen Univ., Kaohsiung, Taiwan 804.
- WPH 236 **Negative ESI Mechanism of TFA / TFE Derivatives of Glyphosate and AMPA;** *Fujiwara, Hideji; Singh, Rajendra. K.; Nadeau, Ronn; Chott, Robert C.; Monsanto Company, St. Louis, MO 63198.

Laser Desorption / Ionization

- WPI 237 **MALDI of Non-Covalently Bound Complexes;** *Woods, A.S.; Buchsbaum, J.C.; Berg, J.M.; Cotter, R.J.; The Johns Hopkins University School of Medicine.
- WPI 238 **Primary Structure of Proteins Determined by MALDI Mass Spectrometry;** Yang, Hou-Jun; Amft, Matthias; Grundwuermer, Johann M.; Li, Yiao-Ling; *Grote Meyer, Juergen; Institute for Physical Chemistry, University Wuerzburg, Germany.
- WPI 239 **MALDI / TOF / MS and Recombinant HIV Protein Expression;** *Parker, Carol; Papac, Damon; Tomer, Kenneth; NIEHS, Research Triangle Park, NC 27709.
- WPI 240 **MALDI-TOF Analysis of Peptide Digestion Mixtures with Detergents;** *Gharahdaghi, Farzin; Fernandez, Joseph; Mische, Sheenah, M; The Rockefeller University.
- WPI 241 **Sample Preparation for Protein Fingerprinting of Bacteria Using MALDI MS;** *Liang, Xiaoli; Bai, Jian; Liu, Yan-Hui; Lubman, David M; Dept. of Chem. The University of Michigan.
- WPI 242 **MALDI Combined with Chemical Reaction Methods for Studying Protein Folding;** *Zhang, Jian; Wang, Yajun; Edmondson, Rick; Gillig, Kent; Hayes, Timothy; Russell, David; Texas A & M University, College Station.
- WPI 243 **Carboxyl-Terminal Ladder Sequencing of Peptides and Proteins;** *Wang, Rong; Chait, Brian T.; The Rockefeller University.
- WPI 244 **PROTEIN CONFORMATION, HYDROGEN BONDING, AND ENERGY TRANSFER IN MALDI;** Bencsura, Akos; *Vertes, Akos; George Washington University, Washington, DC.
- WPI 245 **Mass Tracer Methods based on MALDI;** *Whittall, Randy M.; Schriemer, Dave. C.; Li, Liang; Department of Chemistry, University of Alberta, Edmonton, Canada.
- WPI 246 **MALDI Mass Spectrometry of Tissue Extracts;** *Ogorzalek Loo, Rachel R.; Andrews, Philip C.; University of Michigan, Dept. of Biological Chemistry, Ann Arbor, MI 48109.
- WPI 247 **Evaluation of Maldi.MS For Agricultural Applications;** *Shalaby, Lamaat; Hubbard, Natalie; Stahl, Bernt; Hil-

- lenkamp, Franz; Zeng, Jianru; DuPont Agricultural Products; Dept. of Medical Physics, University of Munster, Germany.
- WPI 248 **CID studies of MALDI generated peptide ions by RETOF MS;** *Holle, Armin; Kvster, Claus; BRUKER-FRANZEN ANALYTIK GMBH.
- WPI 249 **Effective Methods for Characterization of Membrane Proteins by MALDI-MS;** *Shyong, Bao-Jen; Mitchell, Charles; Andrews, Philip; Protein & Carbohydrate Structure Facility, University of Michigan.
- WPI 250 **Assessment of Photoaffinity Crosslinking of Macromolecules by MALD MS;** *Farmer, Terry B.; Caprioli, Richard M.; University of Texas Medical School, Houston, TX.
- WPI 251 **DESALTING PROCEDURE FOR HIGH SENSITIVITY ANALYSIS OF PEPTIDES BY MALDI-MS;** *Zhang, Haiying; Caprioli, Richard M.; University of Texas Medical School, Houston, TX.
- WPI 252 **DIFFERENTIATION OF MULTI-MERIC ANTIGENS BY MSIA AND ENZYMATIC MODIFICATION;** *Nelson, Randall W.; Krone, Jennifer R.; Dogruel, David; Lewis, J. Kathleen; Williams, Peter; Dept. of Chemistry, Arizona State University, Tempe, AZ.
- WPI 253 **Sequence Specific Fragmentation Generated by MALDI in Ion Trap / reTOF;** *Lee, Heewon; Lubman, David; Department of Chemistry, University of Michigan, Ann Arbor, MI 48109.
- WPI 254 **Strategy to Locate Cysteine Residues by Specific Cleavage and MALDI-TOF MS;** *Wu, Jiang; Gage, Douglas A.; Watson, J. Throck; Department of Chemistry, Michigan State University, East Lansing, MI 48824; Department of Biochemistry, Michigan State University, East Lansing, MI 48824.
- WPI 255 **MALDI ANALYSIS OF HYDROPHOBIC PROTEINS ELECTROBLOTTED ONTO MEMBRANES;** *Amundson, Dan; Sunner, Jan; Montana State University, Bozeman, MT.
- WPI 256 **MICRO-SEQUENCING OF MEMBRANE BOUND PEPTIDES USING MALDI-TOF;** Canas-Montalvo, Benito; *Gallagher, Richard T.; Derrick, Peter J.; Department of Chemistry, University of Warwick, Coventry, CV4 7AL, UK.
- WPI 257 **MALDI-MS of Proteins Electroblotted onto Membranes after 2D-PAGE Separation;** *Strupat, Kerstin; **Eckerskorn, Christoph; Karas, Michael; Hillenkamp, Franz; Inst. f. Med. Physics and Biophysics, University of Münster, Germany; Max-Planck-Institut für Biochemie, Munich-Martinsried, Germany.
- WPI 258 **Oligonucleotide And Protein Analyses Using Membranes And MALDI-MS;** *Stevenson, Tracy I.; Loo, Joseph A.; Parke-Davis Pharm. Res., Div. Warner-Lambert Co., Ann Arbor, MI 48105.
- WPI 259 **LDMS for Fast DNA Analysis and Disease Diagnosis;** *Chen, C. H.; Taranenko, N. I.; Allman, S. L.; Tang, K.; Matteson, K. J.; Ch'ang, L. Y.; Oak Ridge National Laboratory, Oak Ridge, Tennessee.
- WPI 260 **Oligonucleotide Analysis by MALDI MS via Ion Trap / reTOF MS;** *Liu, Yan-Hui; Bai, Jian; Qian, Mark G.; Liang, Xiaoli; Lubman, David M.; Department of Chemistry, The University of Michigan.
- WPI 261 **Synthesis and MALDI Characterization of Electrophore-Labeled DNA;** *Hurst, Gregory B.; Britt, Phillip F.; Buchanan, Michelle V.; Oak Ridge National Laboratory, Oak Ridge Tennessee 37831.
- WPI 262 **Use of a Polymeric Substrate in MALDI MS for DNA Mapping and Screening;** *Liu, Yan-Hui; Bai, Jian; Liang, Xiaoli; Lubman, David M.; Department of Chemistry, The University of Michigan.
- WPI 263 **The Effect of Impurities on the Analysis of Oligodeoxynucleotides by MALDI;** *Shaler, Thomas; Wu, Kuang Jen; Wickham, Juanita; Becker, Christopher; SRI International, Menlo Park, CA 94025.
- WPI 264 **Analysis of DNA Dideoxy-Sequencing Reaction Products by MALDI-TOFMS;** *Shaler, Thomas; Wu, Kuang Jen; Sannes, Kristin; Becker, Christopher; SRI International, Menlo Park, CA.
- WPI 265 **Protocols for improved laser ejection / ionization TOFMS of oligonucleotides;** *Srinivasan, Jannavi, R.; Levis, Robert, J.; Narayanaswami, Gowri; Wayne State University.
- WPI 266 **IMPROVEMENT IN OLIGONUCLEOTIDE ANALYSIS BY ADDUCT FORMATION;** *Tang, Xiaodong; **Callahan, John; Zhou, Ping; Hayes, Joe; Vertes, Akos*1-1; George Washington University, Washington D.C.; Naval Research Laboratory, Washington DC.
- WPI 267 **MALDI Post-Source Decay of Oligonucleotides;** *Deterding, Leesa; Tomer, Kenneth; NIEHS, Research Triangle Park, NC.

- WPI 268 **NEW INSTRUMENTAL APPROACHES TO TOF MASS SPECTROMETRY OF DNA;** *Dogruel, David; Nelson, Randall W.; Williams, Peter; Dept. of Chemistry, Arizona State University.
- WPI 269 **PROGRESS IN DNA SEQUENCING AND FUNDAMENTAL STUDIES USING MALDI-TOFMS;** *Chou, Chau-Wen; Nelson, Randall W.; Williams, Peter; Dept. of Chemistry, Arizona State University.
- WPI 270 **MALDI of Drug Compounds from Intact Biological Tissue;** *Reddick, Christopher; Yost, Richard; University of Florida, Gainesville, FL.
- WPI 271 **EVALUATING MALDI-TOF-MS FOR THE SCREENING OF TRACE LEVELS OF ANTIBIOTICS;** Voyksner, Robert; *Keever, Jeff; Research Triangle Institute, P.O. Box 12194, RTP, NC 27709.
- WPI 272 **Application of MALDI TOFMS for Quantitative Analysis;** *Hensel, Russell; King, Richard; Owens, Kevin; Department of Chemistry, Drexel University, Philadelphia, PA.
- WPI 273 **Analysis of Synthetic Polymers and Copolymers by MALDI-MS;** *Schaer, Martin; Ciba-Geigy Limited, CH-4002 Basel, Switzerland.
- WPI 274 **Characterization of Polyesters by Transesterification Using MALDI TOF MS;** *Williams, John B.; Gusev, Arkady I.; Hercules, David M.; University of Pittsburgh Pittsburgh, Pennsylvania.
- WPI 275 **Accuracy of MALDI for Mol. Weight Characterisation of Synthetic Polymers;** *Overberg, A.; Ingendoh, A.; Keane, A.; Sutton, C.; Cottrell, J. S.; Finnigan MAT Ltd, Hemel Hempstead, Herts. HP2 4TG, UK.
- WPI 276 **The Analysis of Synthetic Polymers by MALDI Mass Spectrometry;** *McIver, Jr., Robert T.; Li, Yunzhi; University of California, Irvine.
- WPI 277 **High Resolution MALDI Studies of Polymer Mixtures and Copolymers;** *Schriemer, Dave C; Li, Liang; Department of Chemistry, University of Alberta, Edmonton Canada.
- WPI 278 **Analysis of GPC Standards by Matrix-Assisted Laser Desorption / Ionization;** Hanley, Brian; Parees, David; *Hanton, Scott; **King, Richard; Owens, Kevin; Air Products and Chemicals, Allentown, PA 18195; Department of Chemistry, Drexel University, Philadelphia, PA 19104.
- WPI 279 **Structural Determination of Azo Dyes by Photoionisation Mass Spectrometry;** *Wright, Scott; Dale, Michael; Jones, Anita; Langridge-Smith, Patrick; Department of Chemistry, University of Edinburgh, Edinburgh, EH9 3JJ, UK.
- WPI 280 **Two Step Laser Mass Spectrometry of Copolymerised Indole Derivatives;** *Mackintosh, J. Gordon; Mount, Andrew; Wright, Scott; Redpath, Craig; Dale, Michael; Langridge-Smith, Patrick; Department of Chemistry, University of Edinburgh, Edinburgh, EH9 3JJ, U.K.
- WPI 281 **Molecular Analysis From Organic Substrates Using Laser Mass Spectrometry;** *Dale, Michael; Langridge-Smith, Patrick; **Zhan, Qiao; Zenobi, Renato; Costello, Kevin; Department of Chemistry, University of Edinburgh, Edinburgh, EH9 3JJ, U.K.; LPAS (chimie), Ecole Polytechnique Fédérale, CH-1015 Lausanne, Switzerland.
- WPI 282 **Wavelength Dependent Photo-ionization of some Amines at Metal Surfaces;** *Goldschmidt, Robert; Owens, Kevin; Department of Chemistry, Drexel University, Philadelphia, PA.
- WPI 283 **Enhanced Detection Limits of High Molecular Weight PAHs Using LD-TOF MS;** *Soloveytschik, Boriana; **Miller, John; Vertes, Akos; George Washington University, Washington DC.
- WPI 284 **Real-Time Monitoring of Aerosol Reactions;** *Carson, Peter; Johnston, Murray; Wexler, Anthony; University of Delaware.
- WPI 285 **Laser Desorption / FTMS For Polymer Microstructure Characterization;** *Qian, Kuangnan; Tianlan, Zhang; Ridge, Douglas P.; W.R. Grace & Co.-Conn., Research Division; Department of Chemistry and Biochemistry, University of Delaware.
- WPI 286 **The electronic spectroscopy of some p-alkylphenols and catechols;** *Grace, Louis I.*; Barstis, Toni L.O.**; Lubman, David M.; Dunn, Thomas M.; The University of Michigan, Ann Arbor, Michigan 48109.
- WPI 287 **Laser Desorption / Ionization of Size-Resolved Liquid Microdroplets;** *Mansoori, Bashir; Johnston, Murray; Wexler, Anthony; University of Delaware.
- WPI 288 **Laser Ablation of Organic Dyes;** *Nikiforov, S. M.; Alimpiev, S. S.; Mlinisky, V. V.; General Physics Institute, Russian Academy of Sciences, Moscow.

WPI 289	Laser Desorption Mass Spectrometry of Hydroxy-Nitro-PAHs; *Bezabeh, Dawit; Jones, A. Daniel; Kelly, Peter B.; University of California, Davis, Davis, CA.		
WPI 290	Infrared spectroscopy of methanol attached to gold tetramer cluster ions; **Dietrich, G.; Walther, C.; Kluge, H.-J.; Lotzenkirchen, K.; *Schweikhard, L.; Ziegler, J.; Inst. f. Physik, J. Gutenberg-Universitdt, D-55099 Mainz, Germany; Inst. f. Kernchemie, J. Gutenberg-Universitat, D-55099 Mainz, Gemany.	ThOA 10:10	Dimer Evapoartion from Proton Bound Clusters; Feng, W. Y.; Zhang, R.; *Lifshitz, C.; Dept. of Phys. Chem., The Hebrew University of Jerusalem, Israel.
WPI 291	Laser Desorption / Resonant Laser Ablation - Trace Analysis of Solid Matrices; *Gill, C. G.; Earl, W. L.; Garrett, A. W.; Nogar, N. S.; Hemberger, P. H.; Los Alamos National Laboratory, Los Alamos.	ThOA 10:30	Effects of Protonation on Structure and Entropy of Bifunctional Molecules; Szulejko, Jan; *McMahon, Terry; **Audier, Henri; Milliet, Ariel; Department of Chemistry, University of Waterloo, CANADA; DCMR, Ecole Polytechnique, Pariseau, FRANCE.
WPI 292	Resonant laser ablation / ionization by TOF and FTMS laser microprobes; *Muller, J. F.; Krier, G.; Hachimi, A.; Maunit, B.; Masselon, C.; Lafargue, P. E.; Manuelli, P.; Lobstein, N.; Lab. de Spectrometrie de Masse et de Chimie Laser, U. Metz, Metz (FRANCE).	10:50	Break
WPI 293	Lanthanide, Thorium, and Uranium Oxide Clusters Formed by DLV / FTICR; *Pires de Matos, Antsnio; Margalo, Joaquim; Leal, Joco Paulo; Instituto Tecnolsgico e Nuclear, Sacavim, Portugal.	ThOA 11:10	A Brief History of the Hydrogen Bond; *Smith, Douglas A.; Concurrent Technologies Corporation, Johnstown.
WPI 294	Photolabalisation of Fe Bound Phosphine Ligands: Laser Desorption FTICR MS; *Aplin, Robin; Davies, Stephen; McMarthy, Tom; Watkins, Carl; Evard, Dwight; Dyson Perrins Lab., Oxford University, Oxford, UK.	ThOA 11:50	Detection and Characterization of Gas Phase Cyclodextrin Complexes; *Dejsupa, Chadin; Dearden, David; Brigham Young University, Provo, Utah.
WPI 295	Laser ablation mass spectrometry of sodium penetrated petroleum cokes; *Willett, Gary; Hopwood, Femia; Fisher, Keith; **Greenhill, Paul; The University of New South Wales, Sydney, NSW 2052, Australia.	ThOA 12:10	Probing Hydrogen-Bonding Interactions in an Ion Trap; *Brodbelt, Jennifer; Colorado, Armando; Vartanian, Victor; Chen, Jim; University of Texas at Austin.
8:15 AM	THURSDAY ORALS		
9:05-9:30	PLENARY LECTURE: Prof. R. Graham Cook, s Purdue University; in collaboration with Philip H. Hemberger, Los Alamos National Laboratory	ThOA 04:00	AFTERNOON
	Break	ThOA 04:20	Studies of Photoinduced Proton Transfer Reaction in H-Bonded Clusters; *Huang, Yong; Russell, David H.; Laboratory for Biological Mass Spectrometry, Texas A & M University.
Morning	Hydrogen Bonding Interactions, organized by Jennifer Brodbelt	ThOA 04:40	Protonated Dimethyltartrate Dimer Decomposition Chirality Effects in FTMS; *Nikolaev, Eugene; McMahon, Terry; University of Waterloo, Waterloo, Ontario CANADA; Russian Academy of Sciences, Moscow, Russia.
ThOA 09:30	Strong hydrogen bonding involving singly and multiply charged ions; Klassen, John S.; Blades, Arthur T.; *Kebarle, Paul; Department of Chemistry, University of Alberta, Edmonton, AB, Canada.	ThOA 05:00	Formation and Reactions of Biomolecular Clusters in a Supersonic Jet; Mefert, Anja; Moritz, Fritz; *Grote Meyer, Juergen; Institute for Physical Chemistry, University Wuerzburg, Germany.
			In Search of Non-Classical Ethyl Cation Stabilized by Organic Molecules; *Zagorevski, Dmitri; Holmes, John L.; Chemistry Department, University of Ottawa, Ottawa, Ontario, Canada.
		Morning	Mass Spectrometry in Immunology, organized by Jeff Shabanowitz
		ThOB 09:30	Mass Spectrometry and Immunology: Current Applications and Future Prospects; *Engelhard, Victor H.; University of Virginia, Charlottesville, Va 22908.
		ThOB 10:10	Schistosome Surface Oligosaccharides Modulate Immune Response; *Rein-

- hold, Vernon N.; Reinhold, Bruce B.; Velupillai, Palanivel; Harn, Donald A.; Harvard University/SPH, Boston, MA 02115.
- ThOB 10:30 **Identification of a Graft-vs-Host Disease Associated Human Minor Antigen;** *Sherman, Nicholas E.; den Haan, Joke M.M.; Hunt, Donald F.; Shabanowitz, Jeffrey; Engelhard, Victor H.; Goulmy, Els; University of Virginia, Charlottesville, VA.
- 10:50 **Break**
- ThOB 11:10 **Mass Spectral Strategies for the Analysis of Class I MHC Peptide Antigens;** *Cotter, Robert; Woods, Amina; Jaffee, Elizabeth; Soloski, Mark; Doroshenko, Vladimir; The Johns Hopkins University School of Medicine.
- ThOB 11:30 **CE-MS and MS-MS analyses of lipopolysaccharides from *Pseudomonas aeruginosa*;** Auriola, Seppo I-1; *Thibault, Pierre; Sadovskaya, Irina I-2; Masoud, Hussein I-2; Altman, Elenora I-2; Richards, James I-2; Institute for Marine Biosciences, NRC, 1411 Oxford St., Halifax, Canada.
- ThOB 11:50 **A Human Melanoma Antigen which Results from Post-Translational Modification;** *Hendrickson, Ronald C.; Skipper, Jonathan A.; Gulden, Pamela H.; Shabanowitz, Jeffrey; Chen, Y.; Slingluff, C. L.; Englehard, V. H.; Hunt, Donald F.; Dept. of Chemistry, University of Virginia, Charlottesville, VA.
- ThOB 12:10 **Tandem Mass Spectrometry & Data Analysis of Immunological Peptide Mixtures;** *Yates, John R. III; McCormack, Ashley L.; Eng, Jimmy K.; DeRoos, Paul C.; Rudensky, Alexander Y.; University of Washington, Seattle.
- AFTERNOON**
- ThOB 04:00 **ES and MALDI MS Analysis of Glycosylation-Engineered α -1 Acid Glycoprotein;** *Bean, Mark; Huddleston, Michael; O'Shannessy, Daniel; Carr, Steven; SmithKline Beecham Pharmaceuticals, King of Prussia, PA USA.
- ThOB 04:20 **Epitope Determination by Mass Spectrometry: HIV p24;** *Tomer, Kenneth; Papac, Damon; Parker, Carol; NIEHS, Research Triangle Park, NC.
- ThOB 04:40 **Probing the antibody-antigen interaction by affinity-mass spectrometry;** *Zhao, Yingming; Muir, Tom; Kent, Stephen H.B.; Chait, Brian T.; The Rockefeller University.
- ThOB 05:00 **MASS SPECTROMETRIC IM - MUNOASSAY;** Krone, Jennifer R.; Nel-

son, Randall W.; *Williams, Peter; Dept. of Chemistry, Arizona State University, Tempe, AZ.

- | Morning | Ion Trap Mass Spectrometry, organized by Gary Glush |
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| ThOC 09:30 | Resonant Excitation of Injected Atomic Ions in an Ion Trap MS; *Eiden, Gregory C.; Barinaga, Charles J.; Koppenaal, David W.; Pacific Northwest Laboratory (US DOE by Battelle Memorial Institute). |
| ThOC 09:50 | Ion Remeasurement in the RF Quadrupole Ion Trap; *Goeringer, Douglas; McLuckey, Scott; Crutcher, Richard; Oak Ridge National Laboratory, Oak Ridge, TN, USA. |
| ThOC 10:10 | Buffer Gas and q-eject Effects on the Performance of an Ion Trap; *Lammert, Stephen A.; Wells, J. Mitchell; Oak Ridge National Laboratory, Oak Ridge, Tennessee. |
| ThOC 10:30 | Effect of Ion population Upon MS / MS Parameters in a Quadrupole Ion Trap; *Griffin, Timothy; Yost, Richard; University of Florida, Gainesville, FL. |
| 10:50 | Break |
| ThOC 11:10 | New Developments in Electrospray-Ion Trap Mass Spectrometry; *Schubert, Michael; Wang, Yang; Franzen, Jochen; Bruker-Franzen Analytik GmbH, Fahrenheitstr. 4, D-28359 Bremen, Germany. |
| ThOC 11:30 | Fragmentation of Peptides by MicroES / Quadrupole Ion Storage (QUISTOR) MS; Körrner, Roman; *Wilm, Matthias; Mann, Matthias; Houthaeve, Tony; European Molecular Biology Laboratory (EMBL). |
| ThOC 11:50 | Peptide Sequencing Using Fast MS and MS / MS Scans on a Quadrupole Ion Trap; *Bier, Mark E.; Schwartz, Jae C.; Zhou, Joe; Taylor, Dennis; Syka, John; Fies, Bill; Borchers, Torsten; James, Mike; Finnigan. |
| ThOC 12:10 | Practical Matrix-Assisted Laser Desorption Ion trap MS for Peptide Analysis; *Qin, Jun; Chait, Brian T.; The Rockefeller University, New York. |
| AFTERNOON | |
| ThOC 04:00 | Analyzing Mixtures With a Hybrid Quadrupole / Ion Trap Mass Spectrometer; *Jonscher, Karen R.; Yates, John R.; University of Washington, Seattle. |
| ThOC 04:20 | A Portable Atmospheric Sampling QUISTOR / reTOF- MS for Air Moni- |

- toring; *Grace, Louis I.; Chambers, David M.; Thomas, Stan W.; Andresen, Brian D.; Lawrence Livermore National Laboratory, Livermore, California 94551.
- ThOC 04:40 **Identification of in vitro Bupropion Metabolites by APCI LC-Ion Trap MS;** *Taylor, Lester; Singh, Romi; Chang, Sai; Johnson, Robert; Schwartz, Jae; Barber, Michael; Burroughs Wellcome Co., RTP, N.C.
- ThOC 05:00 **Analytical Protocols for Environmental Substances using an Ion Trap; Plomley, Jeffry B.; Koester, Carolyn J.; Lausevic, Mila; Xuewu, Jiang; *March, Raymond E.; Londry, Frank A.; Trent University, Department of Chemistry, Peterborough, On. Canada K9J 7B8.**

Morning **Time of Flight Mass Spectrometry, organized by Bruno Schueler**

- ThOD 09:30 **Time-of-Flight (TOF) Mass Spectrometry--Nearing the Half Century;** * Standing, K. G.; Physics Dept., University of Manitoba, Winnipeg, Canada, R3T2N2.
- ThOD 10:10 **Organic Secondary Ion Imaging by Time-of-Flight Secondary Ion MS (TOF-SIMS);** *Lindley, Patricia M.; Reich, Fraser; Charles Evans & Associates.
- ThOD 10:30 **Important Aspects Concerning the Quantification of Biomolecules by TOF-SIMS;** *Muddiman, David C; Nicola, Anthony J; Proctor, Andrew; Hercules, David M.; University of Pittsburgh, Department of Chemistry, Pittsburgh, PA 15260; University of Pittsburgh, Department of Chemistry, Pittsburgh, PA 15260.
- 10:50 **Break**
- ThOD 11:10 **Peptide Sequencing by Carboxypeptidase Digestion Coupled with MALDI-TOF;** *Patterson, Dale; Tarr, George; Martin, Stephen; Regnier, Fred; PerSeptive Biosystems.
- ThOD 11:30 **MALDI electrostatic analyzer TOF mass spectrometry studies of biopolymers;** *Wu, Kuang Jen; Marsh, Eugene; Odom, Robert; Charles Evans & Associates.
- ThOD 11:50 **A Mass Analyzer for High Speed Liquid Chromatography;** Andrien, Jr., Bruce; Boyle, James; Banks, Fred; *Dresch, Thomas; Haren, Patrick; Whitehouse, Craig; Analytica of Branford, Inc., Branford, CT.
- ThOD 12:10 **ACHIEVING LINEAR DETECTOR RESPONSE IN TOF-MS;** *Stresau, Dick; Hunter, Kevin; Gray, John; ETP Pty. Ltd., Sydney, Australia.

AFTERNOON

- ThOD 04:00 **A Time Focusing Equation and a Classical Uncertainty Relation in TOFMS;** *Stein, Ronald; University of Washington, Seattle.
- ThOD 04:20 **Analytical Form of Position Focusing in the Parabolic Electrostatic Field;** *Stein, Ronald; University of Washington, Seattle.
- ThOD 04:40 **Space-Velocity Correlation Focusing;** Colby, Steven; *Reilly, James; Indiana University, Bloomington, IN 47405.
- ThOD 05:00 **Tandem Mass Spectrometry on a Triple-ESA Time-of-Flight SIMS Instrument;** *Kristo, Michael; Odom, Robert; Charles Evans and Associates, Redwood City, CA 94063.

Morning **Energy & Petrochemicals, organized by Stel Roussis**

- ThOE 09:30 **Mass Spectrometric Studies on Porphyrins and Geoporphyrins;** *Quirke, J. Martin E.; Yost, Richard A.; Van Berkel, Gary J.; Florida International University, Miami, Florida.
- ThOE 10:10 **Mass Spectrometry of Porphyrins; Ionization and Appearance Energies;** *Ferguson, James A.; Quirke, J. Martin E.; Johnson, Jodie V.; Yost, Richard A.; University of Florida, Gainesville, Florida.
- ThOE 10:30 **Heavy Resid Characterization using High Resolution and Laser Desorption MS;** *Hunt, Jerry E.; Kim, Yeonhee; Winans, Randall E.; Anderson, Ken B.; Miller, Jeffrey; Argonne National Laboratory, Argonne, IL.
- 10:50 **Break**
- ThOE 11:10 **The New EPA GC/MS Method for Total Aromatics in Reformulated Gasoline;** *Drinkwater, Donald; Nero, Vince; Texaco R & D, Beacon, NY.
- ThOE 11:30 **Analysis of Gasoline for Aromatic Hydrocarbons by GC/MS and by Low eV-HR/MS;** *Grigsby, Ronald D.; McWilliams, Ted B.; BDM-Oklahoma/NIPER, P.O. Box 2565, Bartlesville, OK 74005.
- ThOE 11:50 **Hydrocarbon Analysis Using An Ion Trap/MS With External Ionization;** *Teng, Siu; Finnigan MAT, San Jose, CA 95134, USA.
- ThOE 12:10 **Low Ionization Voltage Analysis for Heteroatomic Compounds in Petroleum;** *Davis, Dean; Hughes, Roger; UNOCAL FLHRC, Brea, CA.

AFTERNOON

- ThOE 04:00 **Industrial Applications of FTMS: A Present and Future Prospectus;** *Campana, Joseph; Extrel FTMS, Madison.
- ThOE 04:20 **The Identification of Zinc Dialkylthiophosphates in Lubricating Oils;** *Nero, Vincent; Drinkwater, Donald; Texaco R & D, Beacon, NY.
- ThOE 04:40 **FLUID CATALYTIC CRACKING PRODUCTS CHARACTERIZED BY GCMS;** *Cheng, Michael; Hudson, James; Chevron Research and Technology Company.
- ThOE 05:00 **Coupling FI-MS with LC for the Characterization of Heavy Sat'd Hydrocarbons;** Liang, Zhenmin; *Hsu, Chang Samuel; Blum, Saul; Robbins, Winston; Grosshans, Peter; Exxon Research and engineering Co., Annandale, NJ.

Morning **Organohalogenes: New Issues & Techniques, organized by Carolyn Koester**

- ThOF 09:30 **Why Do We Still Care about Dioxins?;** *Hites, R.A.; Brzuzy, L.; Indiana University, Bloomington, IN.
- ThOF 09:50 **Ultrasensitive and Very Fast Analysis of Halogenated Toxicants;** *Patterson, Donald G.; Jr; Liu, Zaiyou; Green, Vaughn E.; Barr, John R.; Centers for Disease Control.
- ThOF 10:30 **Inventories of Toxic Organochlorine Compounds in the Great Lakes' Sediments;** *Swackhamer, Deborah L.; Pearson, Roger; Eisenreich, Steven J.; Long, David T.; University of Minnesota, Minneapolis, MN.
- 10:50 **Break**
- ThOF 11:10 **Characterization of Major Taxophene Components in Lake Sediments & Aquatic;** *Stern, G.A.; Lowen, M.; **Miskimmin, B.M.; Muir, D.C.G.; Palar, H.; Schindler, D.W.; Westmore, J.B.; Freshwater Institute, Winnipeg, Canada; University of Alberta, Edmonton, Canada.
- ThOF 11:30 **Dioxin and Furan Analysis by Ion Trap, Triple Quadrupole MS / MS, and HRMS;** *Mercer, Roger S.; Plomley, Jeffry B.; Townsend, Jennifer A.; Waddell, Dave S.; Plomley, Jeffry B.; March, Raymond E.; Ontario Min. of Envir. and Energy, 125 Resources Rd., Etobicoke On, Canada.
- ThOF 11:50 **An Isotope Dilution Method for the Analysis of Chlorinated Diphenyl Ethers;** *Ralitsch, Milan; Gottschalk,

Russell; Birkholz, Detlef; Enviro-Test Laboratories.

- ThOF 12:10 **IONIZATION OF PCBs USING ION TRAP MASS SPECTROMETRY;** *Lausevic, Mila; Jiang, Xuewu; Metcalfe, Christopher D.; March, Raymond E.; Department of Chemistry, Trent University, Peterborough, On, Canada K9J 7B8.

AFTERNOON

- ThOF 04:00 **Photoelectron Capture Negative Ion Mass Spectrometry of Organohalogenes;** *COLBY, STEVEN; HARRIS, WILLIAM; HANSER, KENT; REILLY, JAMES; INDIANA UNIVERSITY, BLOOMINGTON IN 47405.
- ThOF 04:20 **Determination of Pesticides on Agricultural Samples by Static SIMS Analysis;** *Ingram, Jani; Groenewold, Gary; Appelhans, Tony; Miller, David; Delmore, James; Idaho National Engineering Laboratory, Idaho Falls.
- ThOF 04:40 **Real-time Analysis of Breath for Carbon Tetrachloride and its Metabolites;** *Kenny, Donald; Thrall, Karla; Callahan, Patrick; Battelle Memorial Institute 505 King Avenue Columbus, Ohio 43201.
- ThOF 05:00 **TUNABLE ENERGY (0.03-60 eV) ELECTRON CAPTURE NEGATIVE ION SPECTROMETRY;** *Laramée, James; Deinzer, Max; Oregon State University, Corvallis, OR 97330.

THURSDAY POSTERS

Fundamental Studies

- ThPA 001 **STRUCTURES AND ELECTRONIC PROPERTIES OF FULLERENE-RELATED COMPOUNDS;** *Hettich, Robert; Ying, Z. Charles; Compton, Robert; Oak Ridge National Laboratory, Oak Ridge, TN 37831-6120.
- ThPA 002 **Reactions of Fullerene Oxides in a FT-Mass Spectrometer;** *Holliman, Christopher; McElvany, Stephen; Naval Research Laboratory, Washington D. C.
- ThPA 003 **Collision experiments with fullerene ions and molecular gases;** *Cooper, Helen J; Gallagher, Richard T; Derrick, Peter J; Vulpius, Tore; Department of Chemistry, University of Warwick, Coventry, CV4 7AL, UK.; HC Orsted Institute, University of Copenhagen, Copenhagen, Denmark.
- ThPA 004 **Intermolecular Nitrile Oxide Transfer in Fullerene Isoxazolines;** *Pogue, Robert; Meier, Mark; Thomas, Craig; Majidi, Vahid; University of Kentucky.

- ThPA 005 **Ion Mobilities from FT-ICR Mass Spectral Peak Widths;** *Pasa-Tolic, Ljiljana; Guan, Shenheng; Marshall, Alan G.; National High Magnetic Field Laboratory, Florida State U., Tallahassee, FL.
- ThPA 006 **Gas Phase Protonation of Aniline;** *Nold, Michael; Wesdemiotis, Chrys; University of Akron, Akron.
- ThPA 007 **Synthesis and Characterization of the 3,5-dehydrophenyl Anion;** *Hu, Jun; Squires, Robert; Purdue University, West Lafayette.
- ThPA 008 **Reactions of Radical Anions Having Formally Distinct Radical & Anion Sites;** *Grabowski, Joseph J.; Owusu, Daniel; Department of Chemistry, University of Pittsburgh.
- ThPA 009 **Photodetachment of Solvated Ions;** *Yang, Yarjing; Peiris, Dil; Riveros, Jose M.; Eyler, John R.; Department of Chemistry, University of Florida, Gainesville, FL 32611, USA; Institute of Chemistry, University of Sao Paulo, Sao Paulo, Brazil.
- ThPA 010 **Advances in Applications of the Kinetic Method;** *Cooks, R. Graham; Horn, Lynn; Chen, Guodong; Yang, Sheng; Patrick, Jeffrey; Department of Chemistry, Purdue University, West Lafayette, IN USA 47907.
- ThPA 011 **Gas Phase Ion Chemistry of Sulfonate Anions;** *Smith, Jacob D.; O'Hair, Richard A.J.; Schmidt, Joseph A.R.; Williams, Todd D.; Department of Chemistry, Kansas State University; Mass Spectrometry Laboratory, University of Kansas.
- ThPA 012 **Bond-Selective Photodissociation: Mechanisms and Applications;** *Bookwalter, Craig; Ross, Philip; Johnston, Murray; University of Delaware, Newark, DE.
- ThPA 013 **Collision Spectroscopy Involving Charge Permutation and Light Emission;** *Wesdemiotis, Chrys; Beranova, Sarka; Polce, Michael J.; Wiedmann, Fred A.; Chemistry Department, The University of Akron, Akron, OH 44325-3601.
- ThPA 014 **Collisionally Induced Emission Spectroscopy;** *Wiedmann, Fred; Wesdemiotis, Chrys; University of Akron, Akron.
- ThPA 015 **Matrix Isolation of Mass-Selected Ions for Analysis by FTIR Spectroscopy;** *Allison, John; Halasinski, Thomas; Godbout, Jerry; Leroi, George E.; Michigan State University, East Lansing, MI.
- ThPA 016 **Spectroscopic Studies of the Electron Recombination of Several Small Ions;** *Foley, B. Lachele; Adams, Nigel G.; Babcock, Lucia M.; Butler, Jeffery M.; Drucker, Mark B.; Department of Chemistry, University of Georgia, Athens, Georgia, 30602, USA.
- ThPA 017 **Ab Initio Calculations of the Ar%CO₂ + Cluster Ion;** *Gellene, Gregory; Department of Chemistry, Texas Tech University, Lubbock, TX 79409-1061.
- ThPA 018 **Symmetry Breaking and Electron Correlation in (O₂)-, O₂, and (O₂) + ;** Chandrasekher, Charu A.; *Griffith, Kelly S.; *Gellene, Gregory I.; Mankato State University, Mankato, Minnesota 56002; Texas Tech University, Lubbock, Texas 79409.
- ThPA 019 **Accurate Ionization Energies And Heats of Formation of Simple Enols;** *Turecek, Frantisek; University of Washington, Seattle, WA.
- ThPA 020 **Theoretical Study of the Ring Closure of the 1,7-Octadiyne Cation;** *Robbins, Ronny; Jensen, James; Berg, Fred; ERDEC, U.S. Army, Aberdeen Proving Ground, MD.
- ThPA 021 **The Presence of Hydrogen Trioxide in the Gas Phase;** *Fujii, Toshihiro; **Kishi, Hiroshi; National Institute for Environmental Studies, Tsukuba, Ibaraki 305; Oyama National College of Technology, Oyama, Tochigi.
- ThPA 022 **Structure of isomeric Gly-Pro b₂ ions calculated by ab-initio methods;** *Eckart, Klaus; Holthausen, Max C.; Koch, Wolfram; Spiess, Joachim; Department of Molecular Neuroendocrinology, MPI f. Experimental Medicine; Institute of Organic Chemistry, TU Berlin.
- ThPA 023 **Fragmentation of Benzalacetones: Theory and Experiment;** Heinicke, Ralf; Moritz, Fritz; *Grottemeyer, Juergen; Institute for Physical Chemistry, University Wuerzburg, Germany.
- ThPA 024 **Ion Pair Formation and Fragmentation in EIMS of Methyl Octadecanoate;** *TAKAYAMA, Mitsuo; HIRAOKA, Kenzo; NAKATA, Hisao; Fac. Pharma. Sci., Toho University, 2-2-1 Miyama, Funabashi 274, Japan.
- ThPA 025 **Gas Phase Decomposition of Dimethyl(hydroxy)silyl Radical;** *Nguyen, Viet; Shaffer, Scott, A; Hop, Marcel, C.E.C.A.; Turecek, Frantisek; University of Washington, seattle, WA; University of Wisconsin, Madison.
- ThPA 026 **Evolution of the m / z_{91:92} ratio during CAD of Butylbenzene Molecular Cation;** Beaugrand, C.; Rolando, C.;

- *Sablier, M.; Ecole Normale Supérieure, Paris, FRANCE.
- ThPA 027 **Metastable decompositions of deprotonated dimers from polymers in NICl-NH_3** ; Binidicte, Remaud; Marlhne, Pirez-Lumbroso; Frangoice, Fournier; **Bernard, Escoffier; *Jean-Claude, Tabet; LCSOB (EP 103), CNRS UPMC, Paris Cidex 05, France; Groupement de Recherche de Lacq, 64 170 Artix, France.
- ThPA 028 **Can Protonated Peptides Fragment from Their Triplet States?**; *Somogyi, Arpad; Wysocki, Vicki; **Mayer, Istvan; Virginia Commonwealth University; Central Research Institute for Chemistry of HAS.
- ThPA 029 **Study Of MS Decomposition Mechanisms In 2,3-Difluoro-dimethyl Succinates**; *Parees, David; Air Products and Chemicals, Inc., Allentown, PA.
- ThPA 030 **Energy Resolved Mass Spectrometry of Organophosphonates**; *Wensing, Michael W.; Forch, Brad E.; Fifer, Robert A.; Snyder, A. Peter; Harden, Charles S.; U.S. Army Research Laboratory, Aberdeen Proving Ground; ERDEC, Aberdeen Proving Ground.
- ThPA 031 **Energy Resolved Mass Spectrometry of Organophosphorus Esters**; *Wensing, Michael W.; Forch, Brad E.; Fifer, Robert A.; Snyder, A. Peter; Harden, Charles S.; U.S. Army Research Laboratory, Aberdeen Proving Ground; ERDEC, Aberdeen Proving Ground.
- ThPA 032 **Effect of Collision Gas on FAB-MS / MS Spectra from Calibration Point Method**; *Lemire, Sharon; Busch, Kenneth; Georgia Institute of Technology, Atlanta.
- ThPA 033 **Considerations about the FAB ionization process of α -aminoacids**; *N. Domingues, Pedro; L. Amado, Francisco; F.Barros, Cristina; O. S. Marques, M. Graa; Ferrer Correia, A. J.; Dep. of Chemistry, Mass Spec. Lab., University of Aveiro, Portugal.
- ThPA 034 **PDMS Analysis of Frozen Cycloalkenes**; Betts, Robert; **da Silveira, Enio; *Schweikert, Emile; Center for Chemical Characterization and Analysis, Texas A & M University; Pontificia Universidade Católica.
- ThPA 035 **Biomolecular Cluster Formation in PDMS**; *Demirev, Plamen; Eriksson, Jan; Hkansson, Per; Papaleo, Ricardo; Sundqvist, Bo; Zubarev, Roman; Div. Ion Physics, Uppsala University, Uppsala, SWEDEN.
- ThPA 036 **252Cf-PDMS of New Pyrazole Derivatives**; Ponciano, Cassia; Lin, Whei; Pereira, Neila; Freitas, Antonio; Barreiro, Eliezer; *da Silveira, Enio; Department of Physics - Catholic University - Rio de Janeiro; Faculdade de Farmácia - Federal University of Rio de Janeiro.
- ThPA 037 **Matrix Effects on the Fragmentation of Vitamin B12 in PDMS**; *Blankenship, James; Van Stipdonk, Michael; Schweikert, Emile; Center for Chemical Characterization and Analysis, Texas A & M University.
- ThPA 038 **DESORPTION OF PEPTIDE IONS USING MALDI MATRICES IN CONJUNCTION WITH PDMS**; *Van Stipdonk, Michael; Blankenship, James; Schweikert, Emile; Center for Chemical Characterization and Analysis, Texas A & M University.
- ThPA 039 **Evaluation of Solvent Effects on MALDI Matrix Crystal Formation**; *Sumner, Lloyd W.; Edmondson, Ricky D.; Campo, Karen K.; Russell, David H.; Laboratory for Biological Mass Spectrometry, Texas A & M University.
- ThPA 040 **Infrared Matrix-Ass. Laser Des./ Ion. (IR-MALDI) using a Free-Electron Laser**; *Cramer, Rainer; **Haglund, Jr., Richard F.; Hillenkamp, Franz; Department of Physics and Astronomy, Vanderbilt University, Nashville, TN; Institute for Medical Physics and Biophysics, Muenster, Germany.
- ThPA 041 **Effect of analyte hydrophobicity on beam-induced dehalogenation in LSIMS**; *Théberge, Roger; Bertrand, Michel, J.; University of Montreal, Montreal, Canada.
- ThPA 042 **Cluster Ion Formation in LSIMS for a Series of Quaternary Ammonium Salts**; *Paul, G. J. C.; Anastassopoulou, J.; Arkas, M.; Paleos, C. M.; **Marcotte, I.; Bertrand, M.; National Technical University of Athens, Athens; University of Montreal, Montreal.
- ThPA 043 **Organic Secondary Ion Emission from Solids and Liquids**; *McMahon, John; Todd, Peter; Caimi, Richard; **Brenna, Thomas; Oak Ridge National Laboratory; Cornell University.
- ThPA 044 **Mechanistic Studies of High Valent Iron Catalysts**; *Weintraub, Susan T.; Bartos, Michael J.; Gordon-Wylie, Scott; Wright, L. James; Noon, Kathleen R.; Collins, Terrence J.; The University of Texas Health Science Center at San Antonio; Carnegie Mellon University, Pittsburgh PA.

Ion Source and Mass Spectrometer Design

- ThPB 045
- ThPB 046 **New Axial Energy Analyzer For Secondary Ion Mass Spectrometry;** *Wei, Jian; Schaeffer, Richard; Extrel Mass Spectrometry, Pittsburgh, PA.
- ThPB 047 **High Resolution High Sensitivity RF-only Quadrupole Mass Spectrometry;** *Pedder, Randall E.; Schaeffer, Richard A.; Extrel Mass Spectrometry, Pittsburgh, PA.
- ThPB 048 **Quadrupole Mass Spectrometry Using the Second Mathieu Stability Region;** *Pedder, Randall E.; Schaeffer, Richard A.; Extrel Mass Spectrometry, Pittsburgh, PA.
- ThPB 049 **A.M. versus F.M. Quadrupole Mass Spectrometer;** *Beaugrand, C.; Rolando, C.; Sablier, M.; Simonneau, G.; Ecole Normale Supérieure, Paris, FRANCE.
- ThPB 050 **Influence of a Low Frequency Component on the Standard RF of a Quadrupole;** Beaugrand, C.; Poisson, L.; *Rolando, C.; Sablier, M.; Ecole Normal Supérieure, URA 1679, Paris, FRANCE.
- ThPB 051 **CHARACTERISTICS OF A HIGH-PRESSURE QUADRUPOLE COLLISION CELL;** *Thibault, Pierre; Whalen, Kevin I-1; Boyd, Robert I-1; **Shushan, Bori; Sakuma, Takeo I-2; National Research Council, 1411 Oxford Street, Halifax, N.S. B3H 3Z1, Canada; SCIEX, 55 Glencameron Drive, Thornhill, Ontario L3T 1P2, Canada.
- ThPB 052 **A New Detector for Magnetic Sector Instruments Based on a Scanning CCD;** *Finch, Jeffrey W.; Musselman, Brian D.; Sims, Gary R.; **Kunihiko, Fumio; JEOL USA Inc., 11 Dearborn Rd., Peabody, MA 01960; JEOL LTD., 1-2 Musashino 3-chome, Akishima, Tokyo 196, Japan.
- ThPB 053 **Secondary electron multiplier operating at forvacuum pressure;** *Makarov, Alexander; **Yablokov, Michail; University of Warwick, Coventry, UK; Karpov's Institute of Physical Chemistry, Moscow, Russia.
- ThPB 054 **The Direct Imaging of Ions Using a Charge Injection Device (CID) Detector;** *Christopher, Steven J.; Parker, Mark A.; Marcus, R. Kenneth; Clemson University.
- ThPB 055 **Development of an Hybrid Mass Spectrometer for Ion Investigations;** Mueller, Matthias; Wilhelm, Ulf; Aicher, Klaus-Peter; *Grotemeyer, Jürgen; Institute for Physical Chemistry, University Wuerzburg, Germany.
- ThPB 056 **Ion Processing: Towards A Massively Parallel Mass Spectrometer;** Dynin, Efim A.; *Kirchner, Nicholas J.; MPLI, San Jose.
- ThPB 057 **An API-Quistor-Quadrupole Mass Spectrometer for Ambient-Air Analysis;** *Gaelli, Markus; Schlunegger, Urs P.; Department of Organic Chemistry, Berne, Switzerland.
- ThPB 059 **Applications of Filtered Noise Fields in Ion Trap Mass Mass Spectrometry;** *Karr, Dane; Hoekman, Don; Koski, Alice; Teledyne Electronic Technologies.
- ThPB 060 **Design of a High Field FTICR for MALDI and LD / CI Studies;** *Pitsenberger, Cynthia; Lei, Qing Paula; Easterling, Michael; Amster, I. Jonathan; University of Georgia, Athens.
- ThPB 061 **Construction of a New External Source FTMS Instrument;** *Carroll, James; Fannin, Steve; Wu, Jiangyue; Lebrilla, Carlito; University of California.
- ThPB 062 **In-Cylindrical-Cell Maldi with FT ICR Spectrometer;** *Knobeler, Markus; Wanczek, Karl Peter; Laukien, Frank; Institute of Inorganic and Physical Chemistry, University, D-28334 Bremen; Bruker Analytical Systems Inc., Billerica, MA 01821.
- ThPB 063 **An Electrostatic Ion Guide Interface for Electrospray FTMS;** *Tang, Liang; Buchanan, Michelle V.; Hettich, Robert L.; Hurst, Gregory B.; Oak Ridge National Laboratory, Oak Ridge, TN.
- ThPB 064 **Interchangeable Electrospray Source for Study of Biomolecules using FTMS;** *Green, M. Kirk; Gard, Eric; Camara, Elvira; Penn, Sharon G.; Lebrilla, Carlito B.; University of California.
- ThPB 065 **High-Field Electrospray FT-ICR Mass Spectrometer for Biopolymer Analysis;** *Pasa-Tolic, Ljiljana; Marto, Jarrod A.; Senko, Michael W.; White, Forest M.; Guan, Shenheng; Marshall, Alan G.; National High Magnetic Field Laboratory, Tallahassee.
- ThPB 066 **The Design and Performance of an In-Field ESI-FTICR Instrument;** *Wu, Qinyuan; Udseth, Harold R.; Anderson, Gordon A.; Van Orden, Steven; Sherman, Michael G.; Chen, Ruidan; Hofstadler, Steven A.; Smith, Richard D.; Pacific Northwest Laboratory, Richland, WA 99352.
- ThPB 067 **Performance of an External Cluster Ion Source and Electrostatic Ion Guide;** *DeSantolo, Anthony M.; Mandich, Mary

- L.; Reents, William D.; At & T Bell Laboratories.
- ThPB 068 **Construction of an ICP-FTICR Mass Spectrometer;** *Milgram, Eric; Watson, Cliff; Eyler, John; Department of Chemistry, University of Florida, Gainesville, FL.
- ThPB 069 **Characterisation of a Novel Ion-Emitter for FT-ICR;** *Spiess, Iris; Maass, Imke; Gvrtler, Bernd; Glasmachers, Albrecht; Wanczek, Karl Peter; Institute of Inorganic and Physical Chemistry, University, Bremen, Germany; Ruhr-University, D-44780 Bochum, Germany.
- ThPB 070 **Fluorescence and Absorption Spectra of Mass-Selected Trapped Ions;** *Jackson, George S.; Huang, Yulin; Guan, Shenheng; Kim, Hyun Sik; Marshall, Alan G.; National High Magnetic Field Laboratory, Florida State U., Tallahassee, FL.
- ThPB 071 **FTICR Performance of a 5.3 Tesla Split-Pair Magnet;** *Reents, William; Mandich, Mary; DeSantolo, Anthony; AT & T Bell Laboratories, Murray Hill, NJ.
- ThPB 072 **Performance of a Small Low-field FT / ICR Mass Spectrometer;** *Perez, James; Leeck, Diane; Beasley, Brandon; Kenttamaa, Hilka; Purdue University, West Lafayette, IN.
- ThPB 073 **Low Noise FTICR Detection Electronics;** *Anderson, Gordon; Bruce, James; Hofstadler, Steven; Rockwood, Alan; Smith, Richard; Pacific Northwest Laboratory.
- ThPB 074 **Improved Performance of a LabVIEW-Based FTICR Data Station;** *Drader, J. J.; Hendrickson, C. L.; Laude, D. A.; The University of Texas at Austin.
- ThPB 075 **A New ICR-Cell for Simultaneous Trapping of Positive and Negative Ions;** *Malek, Robert; Wanczek, Karl-Peter; Institute of Inorganic and Physical Chemistry, University, Bremen.
- ThPB 076 **A scheme for feedback excitation in FTICR-MS based on multielectrode trap;** *Gorshkov, Michael V.; Kouzes, Richard T.; Pacific Northwest Laboratory, Richland, WA 99352.
- ThPB 077 **Hypercube: ICR Ion Trap Optimized for Excitation, Detection, and Trapping;** *Jackson, George S.; Guan, Shenheng; Marshall, Alan G.; National High Magnetic Field Laboratory, Florida State U., Tallahassee, FL.
- ThPB 078 **Extending the Functionality and Performance of Commercial Ion Traps;** *McHugh, Sean; Hoekman, Don; Bradshaw, Stephen; Wilson, Ray; Li, Rebecca; Teledyne Electronic Technologies, Mountain View, CA.
- ThPB 079 **A New Benchtop High Resolution Magnetic Sector Mass Spectrometer;** *Musselman, B.; Asada, T.; Kato, M.; Ishihara, M.; **Shrader, S.; JEOL USA, Inc., 11 Dearborn Road, Peabody, MA 01960; Shrader Analytical and Consulting Laboratories, Detroit, MI.
- ThPB 080 **HED Performance Enhancement of HP 5971 / 5972;** *Roy, Laura; Hamerly, Thomas; Roy, Raymond; Graves, Peter; Detector Technology, Inc., Sturbridge.
-
- Trapped Ions**
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- ThPC 081 **Matrix-Assisted Laser Desorption Ion Trap Tandem MS of Peptides;** *Qin, Jun; Chait, Brian T.; The Rockefeller University, New York.
- ThPC 082 **Filtered Noise Fields in a Paul Ion Trap for Multiple MS Analyses;** *Karr, Dane; Kelley, Paul; Bradshaw, Steve; Louris, John; Teledyne Electronic Technologies.
- ThPC 083 **Advanced SWIFT Technique for MALDI / Quadrupole Ion Trap Mass Spectrometer;** *Doroshenko, Vladimir M.; Cotter, Robert J.; The Johns Hopkins University School of Medicine.
- ThPC 084 **Application of Tailored Waveform Generation to the Quadrupole Ion Trap;** *Taylor, Dennis; Schwartz, Jae; Zhou, Joe; James, Mike; Bier, Mark; Korsak, Andy; Stafford, George; Finnigan MAT, San Jose, CA.
- ThPC 085 **Selective Ion Accumulation in an ICP / ITMS using a Filtered Noise Field;** *Eiden, Gregory C.; Barinaga, Charles J.; Koppenaal, David W.; Pacific Northwest Laboratory (US DOE by Battelle Memorial Institute).
- ThPC 086 **AUTOMATED RESONANCE EJECTION IN A QUADRUPOLE ION-TRAP MASS SPECTROMETER;** Murrell, Jason; *Todd, John F.J.; Watts, Peter; The Chemical Laboratory, University of Kent, Canterbury, Kent, CT2 7NH, UK; CBDE, Porton Down, Salisbury, Wiltshire, SP4 0JQ, UK.
- ThPC 087 **Enhancement of Ion Trapping Efficiency in an Ion Trap with a Pulsed Valve;** *Wang, Yang; Schubert, Michael; Franzen, Jochen; Bruker-Franzen Analytik GmbH, Fahrenheitstr. 4, 28359 Bremen, Germany.
- ThPC 088 **New Method for Signal Generation;** **Schubert, Michael; Nagel, Marcus; Wang, Yang; *Franzen, Jochen; Bruker-

- Franzen Analytik GmbH, Fahrenheitstr. 4, D-28359 Bremen, Germany.
- ThPC 089 **Ion Cloud Structure In A Quadrupole Ion Trap;** *Bach, Gloria A.; Dynin, Efim A.; Kirchner, Nicholas J.; MPII, San Jose.
- ThPC 090 **A Field-Portable Ion Trap for the Detection of Chemical Weapons Compounds;** *Lammert, Stephen A.; Merriweather, Roosevelt; **Sarver, Emory W.; Wasserman, Michael B; Oak Ridge National Laboratory, Oak Ridge; US Army ERDEC, Aberdeen Proving Grounds.
- ThPC 091 **Ion Traps as Chemical Sensors;** *Hart, Kevin J.; C & ASD, Oak Ridge National Laboratory, Oak Ridge, TN.
- ThPC 092 **Electron-Capture by Ions in a Quadrupole Ion Trap;** *Vachet, Richard W.; Clark, Steven D.; Glish, Gary L.; University of North Carolina, Chapel Hill.
- ThPC 093 **Experimental Studies of Space Charge Effects in an Ion Trap MS;** *Shaffer, Barrie A.; Karnicky, Joseph F.; Buttrill Jr., S. E.; Varian Associates' Ginzton Research Center.
- ThPC 094 **Negative Ion Electrospray / Ion Trap MSn For Structure Elucidation;** *Strife, Robert; **Schwartz, Jae; Bier, Mark; Zhou, Joe; The Procter & Gamble Co, Cincinnati, OH 45253; Finnigan MAT, San Jose, CA 95134.
- ThPC 095 **Technological Aspects of a New LC / MSn Quadrupole Ion Trap;** *Schwartz, Jae; Bier, Mark; Taylor, Dennis; Zhou, Joe; Syka, John; James, Mike; Stafford, George; Stafford, George; Finnigan MAT, San Jose, CA.
- ThPC 096 **Novel Technologies and Enhanced Features for GC / MS / MS;** *Johnson, Eric; Schwartz, Jae; Taylor, Dennis; Bier, Mark; Ragsdale, John; Finnigan MAT, San Jose, CA.
- ThPC 097 **Quadrupole Ion Trap Control Language - Power in the Hands of Researchers;** *Zhou, Joe; Schwartz, Jae; Finnigan MAT, San Jose, CA.
- ThPC 098 **Ion Optics and Design Considerations for a New LC / Quadrupole Ion Trap;** *Bier, Mark E.; Schwartz, Jae C.; Zhou, Joe; Taylor, Dennis; Stafford, George; Syka, John; James, Mike; Borchers, Torsten; Finnigan.
- ThPC 099 **Particle Resonances in Monopole and Quadrupole Electric Ion Traps;** *Wuerker, Ralph; **Kelley, Paul; Louris, John; University of California at Los Angeles Plasma Physics Laboratory.
- ThPC 100 **Implications of Ion Population for GC / MS / MS on a Quadrupole Ion Trap;** *Quarmby, Scott T.; Yost, Richard A.; University of Florida, Gainesville, FL 32611-7200.
- ThPC 101 **Investigations of Mass Shifts in the Ion Trap Mass Spectrometer;** *DeGnore, Jon P.; Yost, Richard A.; University of Florida, Gainesville FL.
- ThPC 102 **Effect of Scan Direction on Mass Resolution in Stretched & Compressed Traps;** *Wang, Mingda; Varian Chromatography System.
- ThPC 103 **High Resolution Selective Ion Monitoring In An Ion Trap;** *Wells, Greg; Huston, Chuck; Varian Chromatography Systems.
- ThPC 104 **Field Modulated Selective Ion Storage In An Ion Trap;** *Wells, Greg; Huston, Chuck; Varian Chromatography Systems.
- ThPC 105 **Selected Reagent Ion Chemical Ionization in the 3DQ Mass Spectrometer;** *Stiller, Steven W.; Bach, Gloria A.; Ogan, Kenneth; Hitachi Instruments, Inc., San Jose, CA.
- ThPC 106 **Mass Displacements Measured in a Quadrupole Ion Trap;** *Londry, F.A.; March, R.E.; Trent University, Peterborough, ON, Canada K9J 7B8.
- ThPC 107 **Collisional cooling effects on the ion relaxations in an ITMS instrument;** Philippe, Lihre; Stephane, Bouchonnet; Thierry, Blasco; **Ray, March; *Jean-Claude, Tabet; LCSOB (EP103 CNRS) UPMC, Paris Cidex 05, France.; Department of Chemistry, Trent University, Peterborough, Canada.
- ThPC 108 **QIT / TOF Analysis of Space Charge Effects in a Quadrupole Ion Trap;** *Ventura, M. C.; Laude, D. A.; University of Texas at Austin.
- ThPC 109 **OPTICAL TOMOGRAPHY INSIDE QUADRUPOLE ION TRAPS;** *Garrett, Aaron; Nogar, Nicholas; Hemberger, Philip; **Cleven, Curtis; Cooks, R. Graham; Los Alamos National Laboratory; Purdue University Dept. of Chemistry.
- ThPC 110 **Ion Trap MS: Variations in Electrode Size and RF Drive Frequency;** *Garrett, Aaron W.; Hemberger, Philip H.; Los Alamos National Laboratory, Los Alamos, NM.
- ThPC 111 **New Modes of Operation in an Ion Trap Mass Spectrometer;** *Cleven, C.D.; Frankevich, V.; Horn, L.; Nappi, M.; Soni, M.H.; Weil, C.; Cooks, R.G.; **Garrett, A.W.; Hemberger, P.H.; Amy, J., Stafford, G; Purdue University, W. Lafayette, IN 47907 USA; Los Alamos National Lab, Los Alamos, NM 87545 USA.

- ThPC 112 **Calculation of Parametric Resonance For Non-Linear Ion Trap;** *Dynin, Efim A.; Kirchner, Nicholas J.; MPII, San Jose.
- ThPC 113 **The Use of Ion Trap Mass Spectrometry with FNF Waveforms for MS of Drugs;** *Miller, Mark L.; FBI Laboratory, FBI Academy, Quantico, Virginia 22135.
- ThPC 114 **BIOMARKER DETECTION LIMITS USING A PRYOLYSIS-QUADRUPOLE ION TRAP SYSTEM;** *Basile, Franco; Mowry, Curtis; Voorhees, Kent; Colorado School of Mines, Golden, Colorado.
- ThPC 115 **Reactions of NO + in a QITMS: Implications for Biological Metabolic Studies;** *Silverton, Susan F.; Basic, Cecilia; **Johnson, Jodie V.; Yost, Richard A.; Dept. of Oral Medicine, University of Pennsylvania, Philadelphia, PA; Dept. of Chemistry, University of Florida, Gainesville, FL.
- ThPC 116 **Barbiturate Analysis In A Quadrupole Ion Trap: Borinium Adduct Ion Formation;** *Colorado, Armando; Brodbelt, Jennifer; University of Texas at Austin.
- ThPC 117 **Measurement Of Critical Energies In A Quadrupole Ion Trap;** *Colorado, Armando; Brodbelt, Jennifer; University of Texas at Austin, Austin, TX.
- ThPC 118 **Gas-Phase Basicities and Metal Ion Affinities of Quinones in a QIT;** *Hall, Brad; Brodbelt, Jennifer; University of Texas at Austin.
- ThPC 119 **Metal Complexation of Quinolone Antibiotics in a Quadrupole Ion Trap;** *Alvarez, Erwin J.; Tang, Ming; Brodbelt, Jennifer S.; Vartanian, Victor; The University of Texas at Austin.
- ThPC 120 **The QUISTOR as a Pulsed-Extraction Source for TOF-MS of VOCs in Air;** *Chambers, David M.; Thomas, Stan W.; Grace, Louis I.; Andresen, Brian D.; Lawrence Livermore National Laboratory, Livermore CA 94551.
- ThPC 121 **Oxidation of Azo Dyes: Gas Phase Reactions in an Ion Trap MS;** *Voyksner, Robert; **Betowski, L. Don; Research Triangle Institute, Research Triangle Park NC 27709; US EPA, Las Vegas, NV 89193.
- ThPC 122 **Developments in Explosives Vapor Detection by Glow Discharge / Ion Trap MS;** *Asano, Keiji; Vaidyanathan, Gopalakrishnan; Goeringer, Douglas; McLuckey, Scott; Oak Ridge National Laboratory, Oak Ridge, TN 37831.
- ThPC 123 **CAD Spectra of PAHs by Ion Trap and Triple Quadrupole Mass Spectrometry;** *Winnik, Witold; Betowski, Leon; Pyle, Steven; Marcus, Alvin; Brittain, Robert; U.S. EPA, Las Vegas, NV; Varian Co., Walnut Creek, CA.

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- ThPD 124 **FRAGMENTATION PATHWAYS OF TRIACYLGLYCEROLS DEDUCED FROM MODEL COMPOUNDS;** **STROOBANT, Vincent; *DE HOFFMANN, Edmond; Mass Spectro. Lab., University of Louvain, 1348 Louvain-la-Neuve, Belgium.
- ThPD 125 **Ag-phase HPLC-MS of tri acyl glycerides;** *Schuyl, P.J.W.; Joode, T. de; Duchateau, G.S.M.J.E.; Vasconcellos, M.A.; Unilever Research Laboratory, Vlaardingen, The Netherlands.
- ThPD 126 **Characterization of a Family of Brain Lipids with Sleep-Inducing Potential;** *Siuzdak, Gary; Cravatt, Benjamin F.; Prospero-Garcia, Oscar; Henrikson, Steven J.; Boger, Dale L.; Lerner, Richard A.; The Scripps Research Institute, La Jolla.
- ThPD 127 **EI Mass spectra of Monounsaturated w3 Fatty Acid Nicotinates and SQMGs;** Keusgen, Michael; *Curtis, Jonathan M.; Ayer, Stephen W.; Institute for Marine Biosciences, NRC, 1411 Oxford St., Halifax, Canada.
- ThPD 128 **Identifiication of Eicosanoids Using Electrospray Mass Spectrometry;** *Kerwin, James; Ericsson, Lowell; Botany Dept. AJ-30, Univ. of Washington, Seattle, WA 98195; Biochemistry Dept. SJ-70, Univ. of Washington, Seattle, WA 98195.
- ThPD 129 **Structure of Phosphatidylethanolamine From Lymnaea stagnails Kidney;** *Chen, Su; Li, Ka Wan; Department of Chemistry, Warwick University, Coventry, UK; Faculty of Biology, Vrije University, Amsterdam, The Netherlands.
- ThPD 130 **Negative ion LSIMS and MS / MS of Fmoc-derivatized Aminophospholipids;** *Chen, Su; Mellon, Fred A.; Departmet of Chemistry, Warwick University, Coventry UK; BBRC Institute of Food Research, Norwich, UK.
- ThPD 131 **ESI-MS Analysis of PAF Precursors in Human Keratinocytes and Cell Line;** *Harrison, Kathleen; **Travers, Jeffrey; Murphy, Robert C.; National Jewish Center, 1400 Jackson St., Denver, CO 80206; University of Colorado HSC, 4200 E. 9th Ave., Denver, CO 80262.
- ThPD 132 **IDENTIFICATION OF 20-HETE IN RAT KIDNEY PHOSPHATIDYLINOS-**

- ITOL; *Zhu, Ying; McGiff, John C.; Balazy, Michael; New York Medical College.**
- ThPD 133 **Phospholipid Analysis by MALDI FT-ICR MS / MS; *Marto, Jarrod A.; White, Forest M.; Marshall, Alan G.; National High Magnetic Field Laboratory, Florida State U., Tallahassee, FL.**
- ThPD 134 **Detection of Phospholipid Molecular Species in U937 Cells using CF-LSIMS; *Li, Chun; Yergey, James; Merck Frosst Centre for Therapeutic Research.**
- ThPD 135 **Analysis for Analogs of Phospholipids by FAB Mass Spectrometry; *Yu, Chungping; Huang, Jianxing; Widlanski, Theodore S.; Indiana University, Chemistry Department, Bloomington, IN 47405.**
- ThPD 136 **Analysis of Polyunsaturated Phospholipid Turnover by Electrospray LC / MS; *Ma, Yee-Chung; Ward, Glen; Wang, Tao-Chin; Salem, Jr, Norman; Kim, Hee-Yong; Section of Mass Spectrometry, LMBB, NIAAA, NIH; NIMH, NIH.**
- ThPD 137 **Isolation and Identification of Phospholipids in Lipid Extracts by ES / MS / MS; *Duffin, Kevin; Obukowicz, Mark; Shieh, J.J.; Monsanto Corporate Research, Monsanto Co., St. Louis.**
- ThPD 138 **Massive Cluster Impact Ionization of Phospholipids; *Dookeran, Nyla; Todd, Peter; Oak Ridge National Laboratory.**
- ThPD 139 **Formation of the [M-H] + Ion in the LSIMS Mass Spectrum of Sphingosine; *Chevis, Eddie A.; Busch, Kenneth L.; Georgia Institute of Technology, Atlanta.**
- ThPD 140 **Characterization of GS-15 and Biomarkers of the Helderberg Formation; *Ospina, Maria; Powell, David; Yost, Richard; **Channell, James; Department of Chemistry, University of Florida, Gainesville, FL; Department of Geology, University of Florida, Gainesville, FL.**
- ThPD 141 **PY / MS FAME EXTRACT PROFILING OF PATHOGENIC MICROORGANISMS; *Basile, Franco; **Hadfield, Ted L.; Sickenberger, Dave W.; Voorhees, Kent J.; Colorado School of Mines, Golden, Colorado; Armed Forces Institute of Pathology, Washington, D.C.**
- ThPD 142 **SPECIES DIFFERENTIATION OF BEESWAXES USING PYROLYSIS MASS SPECTROMETRY; **Beverly, Michael; Kay, Paul; *Voorhees, Kent J.; Colorado School of Mines, Golden CO.**
- ThPD 143 **GC-MS TECHNIQUES USED IN EVALUATING ALCOHOL AFFECTS ON LIPID METABOLISM; *Pawlosky, Robert; Salem, Norman; National Institute on Alcohol Abuse and Alcoholism.**
- ThPD 144 **A COMPARISON OF HIGH- AND LOW- ENERGY CID OF DERIVATIZED LIPIDS; *Griffiths, William; Yang, Yang; Zhang, Jie; Lindgren, Jan Eke; Sjövall, Jan; Karolinska Institute, Stockholm.**
- ThPD 145 **Electron Capture MS Analysis of Lipid Peroxidation Products; *Grimsrud, A.J.; van Kuijk, F.J.G.M.; Thomas, D.W.; Sears, L.J.; Dept. of Chemistry and Biochemistry, Montana State Univ. Bozeman, MT 59717; Life Sciences Division, SRI International. Menlo Park, CA 95024.**
- ThPD 146 **Analysis of Neurosteroids by Liquid Chromatography / Mass Spectrometry; *Kim, Hee-Yong; Romeo, Elena; Ma, Yee-Chung; Section of Mass Spectrometry, LMBB, NIAAA, NIH, Bethesda, MD 20892-1256.**
- ThPD 147 **MS / MS Study of PBN Spin Adducts from Rat liver Microsomal Dispersions; *Sang, Hong; Janzen, Edward, G; Arimura, Masana; Kotake, Yashige; Dubose, Coit M.; Poyer, J. Lee; Oklahoma Medical Research Foundation.**
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- Carbohydrates**
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- ThPE 148 **Characterisation of Glycosylation Sites in Recombinant Proteins by ES-MS / MS; Truong, Long; Eng, Marian; Canova-Davis, Eleanor; *Ling, Victor; Analytical Chemistry Dept., Genentech Inc., So. San Francisco, CA 94010.**
- ThPE 149 **Determination of glycosylation in external invertase by MALDI-TOF MS; *Zeng, Chenhui; Biemann, Klaus; Massachusetts Institute of Technology, Cambridge.**
- ThPE 150 **Characterizing the N-Glycosylation of CRF-Binding Protein; *Craig, A. G.; Sutton, S. W.; Vaughan, J.; Koerber, S.C.; Fischer, W.H.; The Salk Institute, La Jolla CA.**
- ThPE 151 **Characterization of a Plasminogen Activator with LC, CE, ESI-MS and MALDI; Apffel, A.; *Chakel, J.; Hancock, W. S.; Holloway, B.; Swedberg, S.; Udiavar, S.; Pungor Jr., E.; Souders, C.; Hewlett-Packard Laboratories, Palo Alto, CA; Berlex Biosciences, Richmond, CA.**
- ThPE 152 **Analysis of parotid gland oligosaccharides by MALDI mass spectrometry; Wing, David R.; O'Donnell, Niall; Naven, Thomas J. P.; *Harvey, David J;**

- Glycobiology Institute, University of Oxford, Oxford, UK.
- ThPE 153 **Analysis of the N-linked oligosaccharides of human C1s using ESI-MS;** **Ptilot, Yves; *Thibault, Pierre; Thilens, Nicole; Rossi, Vronique; Lacroix, Monique; Coddeville, Bernadette; Spik, Genevive; Schumaker, Verne; Institute of Marine Bioscience (CNRC), Halifax; Institut de Biologie Structurale (CEA-CNRS), Grenoble.
- ThPE 154 **GLYCOSYLATED END-PRODUCTS OF Beta-2-MICROGLOBULIN IN SERUM BY MALDI-MS;** *Dreifuss, Peter; Vertes, Akos; **Tang, X; Braatz, James; Hull, Clifford; W. R. Grace & Co., Conn. 7379 Route 32, Columbia, MD 21044; Dept. of Chemistry, George Washington Univ., Washington, DC 20052.
- ThPE 155 **Characterization of human Chorionic Gonadotropin Using HPLC / MS;** Liu, Chuanliang; *Bowers, Larry; Indiana University Medical Center, Indianapolis, IN.
- ThPE 156 **Glycosylation Site Mapping by MALDI-TOF;** *Yang, Y.; Orlando, R.; CCRC, UGA, 220 Riverbend Rd., Athens, GA 30602-4712.
- ThPE 157 **Characterizing the Carbohydrate Moieties of EPGs and PGIPs by MALDI-TOF;** *Kolli, V.S.K.; Bergmann, C.; Mohn, C.; Albersheim, P.; Darvill, A.; Orlando, R.; CCRC, UGA, 220 Riverbend Rd., Athens, GA, 30602-4712, USA.
- ThPE 158 **Characterization of the Nodulation Factors Produced by Bradyrhizobium;** *Kolli, V.S.K.; Carlson, R.W.; Peters, N.K.; Orlando, R.; CCRC, UGA, Athens, GA 30602, USA; Institute of Biology and Geology, University of Tromsø, Tromsø, Norway.
- ThPE 159 **FAB and ESIMS of Acidic Glycosphingolipids---Lex- and Lea-derivatives;** *Ohashi, Yoko; Ii, Tadashi; Kurono, Sadamu; Ogawa, Tomoya; Nagai, Yoshitaka; The Institute of Physical and Chemical Research (RIKEN).
- ThPE 160 **MALDI-MS ANALYSIS OF GLANGLIOSIDES FROM HUMAN GRANULOCYTES;** *Peter-Katalinic, Jasna; **Stahl, Bernd; Karas, Michael; Hillenkamp, Franz; Hanisch, Franz-Georg; Egge, Heinz; Muething, Johannes; Spanbroek, Rainer; Inst. for Physiological Chem., University of Bonn, Germany; Inst. for Medical Physics, University of Muenster, Germany.
- ThPE 161 **SIALYLATION OF GANGLIOSIDES FROM DEVELOPING CHICKEN BRAIN BY ES-MS;** *Peter-Katalinic, Jasna; Ashcroft, Alison; Green, Brian; Hanisch, Franz-Georg; Muething, Johannes; Institute for Physiological Chemistry, University of Bonn, Germany.
- ThPE 162 **ESI-MS and ESI-CID-MS / MS of Complex neoLacto-Series Glycosphingolipids;** *Leverly, Steven B.; **Salyan, Mary Ellen K.; Stroud, Mark R.; PE-Applied Biosystems Division, Foster City, CA; The Biomembrane Institute, Seattle, WA.
- ThPE 163 **GLYCOSPHINGOLIPIDS FROM BOVINE RED BLOOD CELLS AND FOETAL CALF BRAIN;** *Perreault, Helene; Koul, Omanand; Street, Jacqueline; McCluer, Robert; **Costello, Catherine; Mass. Inst. of Technology, Cambridge, MA; EKS Center for Mental Retardation, Waltham, MA.
- ThPE 164 **Structural Analysis of GM1 Derivatives by Mass Spectrometry;** *Chen, Su; Kirschner, Gunther; Department of Chemistry, Warwick University, Coventry, UK; FIDIA Research LABs, Abano Terme, Italy.
- ThPE 165 **Detailed Characterization of Glycosphingolipids by ES-MS-CID-MS;** *Reinhold, Bruce B.; Song, Ye; Reinhold, Vernon; Brigande, John V.; Seyfreid, Thomas, N.; Harvard University/SPH, Boston, MA 02115; Boston College, Chestnut Hill, MA 02167.
- ThPE 166 **Determination of the Glycosylation Position in Mono-O-glycosyl Flavonoids;** Li, Qimin; Van den Heuvel, Hilde; *Claeys, Magda; Univerisity of Antwerp (U.I.A.), Antwerp, Belgium.
- ThPE 167 **Mass Spectrometry and LC / MS of Polyphenols;** *Williams, Jon; **Belanger, Ronald; Cohen, Gerald; Kraft Foods Glenview, IL; Kraft Foods Tarrytown, NY.
- ThPE 168 **Low-energy Fragmentation of Protonated Glycoalkaloids and Related Aglycones;** *Claeys, Magda; Van den Heuvel, Hilde; Chen, Su; Derrick, Peter J.; Mellon, Fred A.; Price, Keith R.; University of Antwerp (U.I.A.), Antwerp, Belgium.
- ThPE 169 **MALDI-MS of Bacterial Glucans;** *Stahl, Bernd; **Talaga, Philippe; Zeng, Jianru; Karas, Michael; Steup, Martin; Hillenkamp, Franz; Bohin, Jean-Pierre; Inst. f. Medical Physics and Biophysics,

- University of Muenster, Germany; Lab. de Chimie Biol., Universite d. Sciences et Technol. de Lille, France.
- ThPE 170 **Examination of Chitin-Metal Interactions by ESI and MALDI Mass Spectrometry;** *Callahan, John H.; Shahgholi, Mona; Ross, Mark M.; Naval Research Laboratory, Washington, D.C.
- ThPE 171 **FAB-MS / MS of Immunoreactive Tetrasaccharides from Chondroitin Sulfate;** *Ohashi, Mamoru; Ii, Tadashi; Kubota, Masayuki; Hirano, Takashi; Yoshida, Keiichi; Suzuki, Sakaru; The University of Electro-Communications, Tokyo; Tokyo Research Institute, Seikagaku Corporation, Tokyo.
- ThPE 172 **Mass Spectrometric Characterisation of Sulfated Oligosaccharides;** *Watson, Eric; Termin, Andreas; Shah, Bhavana; Bhide, Anjali; Zamborelli, Tom; Venot, Andre; Amgen Inc., Amgen Center, Thousand Oaks, CA 91320.
- ThPE 173 **ES-MS of Heparin-Derived Glycosaminoglycan Disaccharides;** *Watson, Eric; Yao, Flora; Amgen Inc., Amgen center, Thousand Oaks, CA 91320.
- ThPE 174 **CE / MALDI-MS of Mixtures of Heparin Derived Oligosaccharides;** *Rhomberg, Andrew; Juhasz, Peter; Biemann, Klaus; Massachusetts Institute of Technology, Cambridge.
- ThPE 175 **Ionspray (lc-)ms of synthetic sulphated oligosaccharides;** *Jacobs, Peter L.; Westerduin, Pieter; **Silvestro, Luigi; AKZO NOBEL, N.V. Organon, Scientific Dev. Group, Oss, The Netherlands; ResPharma Pharmacological Research S.r.l., Torino, Italy.
- ThPE 176 **Massive Cluster Impact Ionization of Saccharides;** *Dookeran, Nyla; Todd, Peter; Oak Ridge National Laboratory.
- ThPE 177 **LC-ESIMS and in-source CID of derivatized oligosaccharides;** *Aduru, Subhodaya; **Faull, Kym F.; molecular and medical sciences mass spectrometry, UCLA, Los Angeles.
- ThPE 178 **Improved MS Analysis of Oligosaccharides as Fluorinated Glycosylamines;** *Huang, Zhi-Heng; Gage, Douglas A.; Dept. of Biochemistry, Michigan State University, East Lansing, MI 48824.
- ThPE 179 **MALDI and ESI mass spectrometry of cationic oligosaccharide derivatives;** *Naven, Thomas J. P.; Harvey, David J.; Glycobiology Institute, University of Oxford, Oxford, UK.
- ThPE 180 **MALDI / FTMS of Oligosaccharides;** *Fannin, Steve; Wu, Jiangyue; Carroll, James; Lebrilla, Carlito; University of California, Davis.
- ThPE 181 **MALDI-MS Applications on Carbohydrates;** *Bvrnsen, Klaus Olaf; Mohr, Martin; Widmer, H. Michael; Ciba-Geigy Ltd. Basle, Switzerland.
- ThPE 182 **ANOMERIC CONFIGURATION OF SUGAR NUCLEOTIDES BY FAB / MS / MS;** WOLUCKA, B. A.; *de HOFFMANN, E.; UNIVERSITY OF LOUVAIN, LOUVAIN-LA-NEUVE, BELGIUM.
- ThPE 183 **LC-MS / MS of Carbohydrates with Post Column Addition of Metal Salts;** *Kohler, Martin; Leary, Julie, A.; College of Chemistry, University of California, Berkeley, CA 94720-1460.
- ThPE 184 **KER of Oligosaccharide / Metal / Ligand Isomers Using FAB and ES Ionization;** Smith, Glenn; Bott, Geoffrey; *Leary, Julie, A.; Department of Chemistry, University of California, Berkeley, California.
- ThPE 185 **ESI-MS / MS Study of Co, Zn, Mn, Cu, Ca and Mg Complexes of Oligosaccharides;** *Sible, Emily, M.; Brimmer, Steven, P.; Leary, Julie, A.; Department of Chemistry, University of California, Berkeley CA 94720-1460.
- ThPE 186 **Post-source decay fragmentation of oligosaccharides ionized by MALDI;** *Maisey, E. Anne; **Harvey, David J.; Fisons Instruments VG Organic, Manchester, UK; Glycobiology Institute, University of Oxford, UK.
- ThPE 187 **STRUCTURAL ANALYSIS OF GLYCANS BY POST-SOURCE DECAY MALD MASS SPECTROMETRY;** *Domon, Bruno; Lemoine, Jirtme; Schubert, Ralph; Universiti Sciences et Technologies de Lille, F-59655 Villeneuve d'Ascq.
- ThPE 188 **Oligosaccharide Structure Determination On An Ion Trap;** *Asam, Michael; Glish, Gary; UNC-CH, Chapel Hill.
- ThPE 189 **High energy CID spectra of complex oligosaccharides ionized by MALDI;** *Bateman, Robert H.; **Harvey, David J.; Fisons Instruments VG Organic, Manchester, UK; Glycobiology Institute, University of Oxford, Oxford, UK.
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- ThPF 190 **Using Aerosols for MALDI Liquid Introduction;** Wei, Gang; Fei, Xun; He, Lin; *Murray, Kermit K.; Department of Chemistry, Emory University.

- ThPF 191 **Design parameters of a gridless ion mirror for post source decay analysis;** *Zeng, Jianru; Karas, Michael; Hillenkamp, Franz; Inst. f. Med. Physics and Biophysics, University of Muenster, Germany.
- ThPF 192 **A Method for Acquiring Daughter-Ion Spectra in a Reflecting TOF Instrument;** *Westmacott, G R; Ens, W; Standing, K G; Dept. of Physics, University of Manitoba, Canada R3T 2N2.
- ThPF 193 **Time of Flight PSD measurements with pre-cursor ion selection;** *Kowalski, Paul; Hauer, Charles; Cornett, DS; Park, Melvin; Stack, Robert; Wronka, John; Bruker Analytical Systems, Inc., Billerica, MA; New York Department of Public Health, Albany, NY.
- ThPF 194 **High Resolution Precursor Ion Selection for Post Source Decay Experiments;** *Holle, Armin; Park, Melvin; Detlev, Suckau; Bruker-Franzen Analytik GMBH, Bremen, Germany.
- ThPF 195 **Probing the Outer Limits of Performance for MALDI-TOF MS and MS-MS;** *Vestal, Marvin; Juhasz, Peter; Blakley, Calvin; Martin, Stephen; PerSeptive Biosystems, Inc., Cambridge, MA01239.
- ThPF 196 **HIGH RESOLUTION LINEAR MALDI-TOFMS OF PEPTIDES AND OLIGONUCLEOTIDES;** **WEINBERGER, SCOT; KENNY, JAMES; *KORNFELD, RICH; HEWLETT-PACKARD CO., PROTEIN CHEMISTRY SYSTEMS, PALO ALTO, CALIFORNIA.
- ThPF 197 **Strategies for LDI / MALDI on a Sector Instrument;** *Lennon, III, John D.; Shinn, David; Vachet, Richard W.; Glish, Gary L.; University of North Carolina at Chapel Hill, Chapel Hill.
- ThPF 198 **High Resolution Array Detection of the Ions Formed by MALDI;** *Itagaki, Yasuhiro; Fujita, Tsuyoshi; Naoki, Hideo; Nakajima, Terumi; Suntory Institute for Bioorganic Research.
- ThPF 199 **Accurate Mass Determination in MALDI / FTMS using Internal Standards;** *wu, Jiangyue; Fannin, Steve; Franklin, Melanie A.; Molinski, Tadeusz F.; Lebtrilla, Carillo; University of California at Davis.
- ThPF 200 **Ion Coupling in High-Resolution MALDI FT-ICR Mass Spectra of Biopolymers;** *Pasa-Tolic, Ljiljana; Guan, Shenheng; Huang, Yulin; Jackson, George S.; Kim, Hyun Sik; Marshall, Alan G.; National High Magnetic Field Laboratory, Florida State U., Tallahassee, FL.
- ThPF 201 **Peptide Mapping and Sequence Analysis of Proteins by MALDI FT-ICR MS;** *Solouki, Touradj; Pasa-Tolic, Ljiljana; Jackson, George S.; Guan, Shenheng; Marshall, Alan G.; National High Magnetic Field Laboratory, Florida State U., Tallahassee, FL.
- ThPF 202 **Femtomole Biomolecule Detection by Remeasured MALDI FT-ICR MS;** *Solouki, Touradj; Guan, Shenheng; Marto, Jarrod A.; White, Forest M.; Marshall, Alan G.; National High Magnetic Field Laboratory, Florida State U., Tallahassee, FL.
- ThPF 203 **HIGH MASS ANALYSIS IN FOURIER TRANSFORM MASS SPECTROMETRY;** *Yao, Jie; Pastor, Salvador J.; Wilkins, Charles L.; Department of Chemistry, University of California, Riverside, CA 92521.
- ThPF 204 **Further Improvement of Mass Accuracy in MALDI reTOF MS of Peptides;** *Vorm, Ole; Mortensen, Peter; Mann, Matthias; European Molecular Biology Laboratory (EMBL).
- ThPF 205 **Orthogonal-Injection MALDI;** *Dworschak, R G; Ens, W; Spicer, V; Standing, K G; Verentchikov, A V; Physics Dept., University of Manitoba, Canada R3T 2N2.
- ThPF 206 **A Charge Detector for High Mass MALDI Ions;** *Lautz, Carsten; Bahr, Ute; Roehling, Ulrich; Hillenkamp, Franz; Inst. f. Med. Physics and Biophysics, University of Muenster, Germany.
- ThPF 207 **Application of Maximum Entropy to MALDI;** *Zhang, X. Kate; **Ferrige, Anthony G.; Fales, Henry M.; National Institutes of Health, Bethesda, MD; MaxEnt Solutions Ltd. Cambridge, UK.
- ThPF 208 **SEM as a Tool to Investigate Sample Morphology Effects in MALDI MS;** *Westman, Ann; Barofsky, Elisabeth; Dept Agr Chem, Oregon State Univ, Corvallis, OR.
- ThPF 209 **Nanoscale Sample Manipulation and Preparation Method for MALDI MS;** *Golding, Rafael E.; Whittall, Randy M.; Li, Liang; Dept. of Chemistry, University of Alberta. Edmonton, AB, Canada T6G 2G2.
- ThPF 210 **Methods for Modifying the MALDI Process;** *Bai, Jian; Liang, Xiaoli; Liu, Yan-Hui; Lubman, David M; Department of Chemistry, The University of Michigan.
- ThPF 211 **Novel Sample Preparation for MALDI;** *Kochling, Heinrich; Biemann, Klaus;

- Massachusetts Institute of Technology, Cambridge, MA.
- ThPF 212 **Investigation of Sample / Matrix Preparation in MALDI by Confocal Microscopy;** *Li, Liang; Whittall, Randy M.; Dai, Yuqin; Dept. of Chemistry, University of Alberta, Edmonton, AB Canada T6G 2G2.
- ThPF 213 **Influence of Sample Preparation on Time-Dependent MALDI MS of Proteins;** *Lavine, Gary; Allison, John; Michigan State University, East Lansing, MI.
- ThPF 214 **Dependence of Resolution on Laser Power in MALDI-TOF MS;** *Liao, Pao-Chi; Allison, John; Michigan State University, East Lansing, MI.
- ThPF 215 **Big Spot MALDI - Advantages of Irradiating Large Portions of the Target;** *Hiller, Joseph; Szekely, Gabriella; Allison, John; Michigan State University, East Lansing, MI.
- ThPF 216 **The Behavior of Peptide Mixtures in MALDI-MS;** *Hiller, Joseph F.; Lavine, Gary; Micke, Mel; Szekely, Gabriella; Allison, John; Michigan State University, East Lansing, MI.
- ThPF 217 **MALDI Calibration and the Effect of Layered Sample and Standard;** *Zhou, Jie; Lee, Terry D.; Beckman Research Institute of the City of Hope, Duarte, CA.
- ThPF 218 **Charge State Distribution Shifting of Protein Ions Observed in MALDI;** *Zhou, Jie; Lee, Terry D.; Beckman Research Institute of the City of Hope, Duarte, CA.
- ThPF 219 **Optical Characterization of the MALDI Plume;** *Hurst, Gregory B.; Oak Ridge National Laboratory, Oak Ridge Tennessee 37831.
- ThPF 220 **Optoacoustical Monitoring of Laser Absorption of MALDI Matrices;** *Taranenko, N. I.; Golovlev, V. V.; Puzetzy, A. A.; Allman, S. L.; Chen, C. H.; Oak Ridge National Laboratory, Oak Ridge, Tennessee USA.
- ThPF 221 **The Wavelength Dependence of MALDI in the Range 350-450 nm;** *Chen, Xiangjun; Beavis, Ronald C.; Skirball Institute, NYU Medical Center.
- ThPF 222 **Influence of esterification and target preparation in MALDI of polyesters;** *Joklle, Guittard; Martine, Tessier; **Jean-Claude, Blais; Girard, Bolbach; Laurence, Rozes; Alain, Brunot; Ernest, Marichal; Jean-Claude, Tabet; Universiti Pierre et Marie Curie Paris; C.N.R.S. Paris.
- ThPF 223 **Cationization Mechanism of Synthetic Polymers by Alkali Metals in MALD / I;** *King, Richard; Goldschmidt, Robert; Xiong, Yansan; Owens, Kevin; Department of Chemistry, Drexel University, Philadelphia, PA.
- ThPF 224 **Separation of the Desorption and Ionization Events in the MALDI Experiment;** King, Richard; *Owens, Kevin; **Hanton, Scott; Department of Chemistry, Drexel University, Philadelphia, PA; Air Products & Chemicals, Inc., Allentown, PA.
- ThPF 225 **Evaluation the matrices used in MALDI by their FAB mass spectra;** Hsing-Long, Chei; *Jentaie, Shiea; Dept. of Chemistry, Nat'l Sun Yat-sen Univ., Kaosiung Taiwan 804.
- ThPF 226 **Comparisons of Proton Transfer Reactions of MALDI Matrices;** *Kinsel, Gary; Land, Mark; Li, Nan; The University of Texas at Arlington, Arlington, TX 76019.
- ThPF 227 **SEMI-EMPIRICAL STUDY OF PROTON TRANSFER IN MALDI-MS OF SMALL PEPTIDES;** *Sadeghialavijeh, Mehrnoosh; Vertes, Akos; George Washington University, Washington DC.
- ThPF 228 **INTERNAL ENERGIES OF IONS FORMED BY MALDI;** *Gimon-Kinsel, Mary; Gillig, Kent; Sumner, Lloyd; Edmondson, Ricky; Russell, David; Laboratory for Biological Mass Spectrometry, Texas A & M University.
- ThPF 229 **Factors influencing metastable fragmentation in MALDI TOF / MS;** COLBY, STEVEN; Houston, Chris; Christian, Noah; Arnold, Randy; *REILLY, JAMES; INDIANA UNIVERSITY, BLOOMINGTON IN 47405.
- ThPF 230 **Ion Formation and Photodissociation in MALDI-Mass Spectrometry;** Amft, Matthias; Grundwuermer, Johann M.; Yang, Hou-Jun; *Grote Meyer, Juergen; Institute for Physical Chemistry, University Wuerzburg, Germany.
- ThPF 231 **Photochemical versus Thermal Mechanism for MALDI;** Ehring, Hanno; Costa, Cesar; *Demirev, Plamen; Sundqvist, Bo; Div. Ion Physics, Uppsala University, SWEDEN.
- ThPF 232 **Probing The Dynamics of MALDI Ion Formation;** *Edmondson, Ricky D.; Campo, Karen K.; Russell, David H.; Laboratory for Biological Mass Spectrometry, Texas A & M University.
- ThPF 233 **Water as a Matrix in Infrared MALDI-MS;** *Berkenkamp, Stefan; Karas, Michael; Hillenkamp, Franz; Inst. f. Med.

- Physics and Biophysics, University of Muenster, Germany.
- ThPF 234 **Inorganic Matrix uses for MALDI - TOF - MS;** *Tanaka, Koichi; Kawabata, Shin-ichirou; Resch, Martin; Paulus, Gert; **Humphrey, Paul; Dingley, David; Shimadzu Corporation Kyoto 604, Japan; Kratos Analytical Ltd. Manchester UK.
- ThPF 235 **Hydroxy Benzophenones: A New Class Of MALDI Matrices For Proteins / Peptides;** *Reiber, Duane; Brown, Robert; Utah State University, Logan, UT.
- ThPF 236 **Synthesis of MALDI Matrices and Correlation with Ion / Neutral populations;** *Sumner, Lloyd W.; Hipp, Travis L.; Edmondson, Ricky; Gimon-Kinsel, Mary; Russell, David H.; Laboratory for Biological Mass Spectrometry, Texas A & M University.
- ThPF 237 **New matrices for Matrix-Assisted Laser Desorption / Ionization (MALDI) MS;** *Krause, Joern L.; Schlunegger, Urs P.; Department of Organic Chemistry, Berne, Switzerland.
- ThPF 238 **Amino Acid Composition and Wavelength Effect on MALDI-MS of Small Peptides;** *Olumee, Zohra; Vertes, Akos; George Washington University, Washington DC.
- ThPF 239 **Investigation of Selective Peptide Ionization with Various MALDI Matrices;** *Blackledge, James A.; Alexander, Anthony J.; Dodsworth, David W.; Bristol-Myers Squibb Co., Syracuse, NY.
- ThPF 240 **Effects of Substrates on the Ion Yields for Mixture Analysis by MALDI MS;** *Liang, Xiaoli; Bai, Jian; Liu, Yan-Hui; Lubman, David M; Dept. of Chem. The University of Michigan.
- ThPF 241 **Surface Modification of Active Substrate Applied in MALDI MS;** *Liu, Yan-Hui; Bai, Jian; Liang, Xiaoli; Lubman, David M; Department of Chemistry, The University of Michigan.
- ThPF 242 **Affinity Mass Spectrometry: Marker Detection in situ by Signal Amplification;** Yip, Tai-Tung; Van de Water, Judy; Gershwin, M. Eric; *Hutchens, T. William; Dept of Food Science & Technology, Univ. of California, Davis, CA 95616.
- ThPF 243 **Design of Surfaces Enhanced for Photolabile Attachment and Release;** *Hutchens, T. William; Yip, Tai-Tung; Ching, Jesus; Dept. of Food Sci. & Tech., Univ. of California, Davis, CA 95616.
- ThPF 244 **Polymers as a Probe Element for Sur-**

face Enhanced Neat Desorption (SEND); *Bardel, Patrick; Hutchens, T. William; Dept. of Food Science & Technology, Univ. of California, Davis, CA 95616.

- ThPF 245 **The Use of Self-Assembled Monolayer Surfaces for MALDI Analysis;** *Maleknia, Simin, D.

Protein and Peptides

- ThPG 246 **Conformation of cytochrome c2 mutants studied by H / D exchanges using ESIMS;** Halgand, Frdric; Jaquinod, Michel; Caffrey, Michael; Fitch, John; Cusanovitch, Michael; *Forest, Eric; Institut de Biologie Structurale (CEA-CNRS), Grenoble; Department of Biochemistry, University of Arizona, Tucson.
- ThPG 247 **Detecting Conformational changes in Cytochrome C upon binding of membranes;** *Stoker, Paul W.; Ng-Ilag, Jocelyn H.; Smith, David L.; University of Nebraska-Lincoln, Lincoln, Nebraska.
- ThPG 248 **Probing Conformation and Dimerization in Yeast Hexokinase with ESIMS;** *Eckart, Klaus; Spiess, Joachim; Department of Molecular Neuroendocrinology, MPI f. Experimental Medicine.
- ThPG 249 **ESI-TOF-MS Studies of Refolding and Assembly of Soybean Agglutinin;** *Tang, Xue-jun; Saha, Sanat; Brewer, C. Fred; Chernushevich, Igor; Standing, Kenneth G.; Albert Einstein College of Medicine, Bronx NY 10461; University of Manitoba, Winnipeg, MB, Canada R3T 2N2.
- ThPG 250 **Rapid Deuterium Exchange-in Time for Probing Protein Conformational Change;** *Dharmasiri, Kuruppu; Smith, David L.; University of Nebraska-Lincoln, Lincoln, Nebraska.
- ThPG 251 **ESI-MS of Protein Noncovalent Tetrameric Associations at High m/z;** *Schwartz, Brenda L.; Gale, David C.; Smith, Richard D.; Chilkoti, Ashutosh; Stayton, Patrick S.; Smith, Virginia F.; Randall, Linda L.; Pacific Northwest Laboratory, Richland, WA 99352.
- ThPG 252 **ESI-MS Analysis of the Transthyretin Tetramer & Some Non-Covalent Adducts.;** *Green, Brian N.; **Oliver, Ronald W.A.; Fisons Instruments VG Organic, Altrincham, Cheshire WA14 5RZ, UK.; BMA Research Unit, University of Salford, Salford M6 4WT, UK.
- ThPG 253 **Conformational Changes of Proteins**

- Detected by MALDI-MS; Yang, Hou-Jun; Li, Xia-Ling; *Grote Meyer, Jürgen; Institute for Physical Chemistry, University Wuerzburg, Germany.**
- ThPG 254 **Unusually Strong Binding of A Noncovalent Spermine-Peptide Complex; *Feng, Rong; American Cyanamid Co., P.O. Box 400, Princeton, NJ 08543.**
- ThPG 255 **Conformation of Chaperone Bound Ligands Probed by ESI MS; *Robinson, Carol; Gross, Michael; Dobson, Christopher; Radford, Sheena; Oxford Centre for Molecular Sciences, University of Oxford.**
- ThPG 256 **Studies of H / D exchange of peptides and proteins by using aerosol MALDI; *Wei, Xiaona; Beeson, Michelle D.; Russell, David H.; Laboratory for Biological Mass Spectrometry, Texas A & M University.**
- ThPG 257 **Probing High Order Structure of Proteins by H / D Exchange / ESI-MS; *Maier, Claudia S.; Kim, Ok-Hee; Deinzer, Max L.; Department of Agricultural Chemistry, Oregon State University, Corvallis.**
- ThPG 258 **Studies of Partially Folded Proteins by H / D Exchange and ESI-MS; *Tang, Xue-jun; Wang, Fang; Albert Einstein College of Medicine, Bronx, New York 10461.**
- ThPG 259 **Protein-Oligonucleotide Dissociation Constants Measured Using ES-MS; *Griffey, Richard H.; Greig, Michael J.; Gaus, Hans; Cummins, Lendell L.; Samor, Henri; Isis Pharmaceuticals.**
- ThPG 260 **Disulfide bridges assignments of homologous vegetable proteins; Guy, Philippe; Gagnon, Jean; Marion, Didier; *Forest, Eric; Institut de Biologie Structurale (CEA-CNRS), Grenoble; Institut National de Recherche Agronomique, Nantes.**
- ThPG 261 **Characterization and Location of Disulfide Bonds in Proteins with ABD-F; *Rajamani, Umamaheswari; Pannell, Lewis; Sackett, Danny; Le, Han; Lecchi, Paolo; Lab. of Analytical Chemistry, NIDDK, NIH, Bethesda MD; Lab. of Biochemical Pharmacology, NIDDK, NIH, Bethesda MD.**
- ThPG 262 **Determination of Disulfide Bonds in Proteins from AIDS Related Research; *Pannell, Lewis; Rajamani, Umamaheswari; Le, Han; Lecchi, Paolo; Lab. of Analytical Chemistry, NIDDK, NIH, Bethesda MD 20892.**
- ThPG 263 **Identification of Cross-Linking Peptides Using ESI and MALDI-TOF MS; *Le, John C.; Haniu, Mitsuru; Horan, Thomas; Katta, Viswanatham; Arakawa, Tsutomu; Rohde, Michael; Protein Structure, Amgen Inc., Thousand Oaks, California 91320; Protein Chemistry, Amgen Inc., Thousand Oaks, California 91320.**
- ThPG 264 **Synthesis of Disulfide Linked B-Actin Peptides; *Bencsath, F. Aladar; Shartava, Archil; Monteiro, Carlos A.; **Goodman, Steven R.; Department of Biochemistry and Molecular Biology, Univ. South Alabama; USA Comprehensive Sickle Cell Center, Univ. South Alabama, Mobile AL 36688.**
- ThPG 265 **DETERMINATION OF THE LOCATION OF CYS IN PEPTIDES BY TANDEM MS / MS; *NEMIROVSKIY, OLGA; GROSS, MICHAEL; Department of Chemistry, Washington University, St. Louis, MO 63130.**
- ThPG 266 **Identification of a Cysteine Substitution in GCSF by Peptide Mapping-ESI-MS; *Yeh, Che-Hung; Tedeschi, Nicole; Herman, Alan; Amgen, Inc.**
- ThPG 267 **The Location of S-S Bonds in Proteins by Partial Acid Hydrolysis and MS; *Aplin, Robin; Anderson, Kerry; OCMS, Oxford University, Oxford UK.**
- ThPG 268 **Disulfide Structure Study of EGF domain of Neu Differentiation Factor (NDF); *Katta, Viswanatham; Liu, Naili; Meng, Shi-Yuan; Zamborelli, Tom; Mayer, John; Lu, Hsieng; Hara, Shinichi; Amgen Inc., Thousand Oaks, CA and Boulder, CO.**
- ThPG 269 **Identification of Venomous Snakes using Electrospray Mass Spectrometry; *Perkins, John R.; Despeyroux, Dominique; Gallagher, Richard T.; Derrick, Peter J.; Jennings, Keith R.; Newton, Russell P.; University of Warwick; University of Swansea.**
- ThPG 270 **MS Investigation of the Molecular Mechanism of Action of Cytotoxin B; *Wilm, Matthias; Just, Ingo; Selzer, J; Aktories, Klaus; Mann, Matthias; European Molecular Biology Laboratory (EMBL); Institut für Pharmakologie und Toxikologie der Univ des Saarlands.**
- ThPG 271 **Tandem Mass Spectrometry of Cyanobacterial Toxins; Dale, Vanessa; *Jennings, Keith; Department of Chemistry, University of Warwick, Coventry CV4 7AL, UK.**
- ThPG 272 **Structural Analysis of Conotoxins by Mass Spectrometry; *Nakamura, Takemichi; Fainzilber, Michael; Zlotkin,**

- Eliahu; Burlingame, A. L.; Dept. Pharmaceutical Chem., Univ. California, San Francisco, CA94143-0446; Molecular Neurobiology, Free University of Amsterdam, The Netherlands.
- ThPG 273 **STRUCTURE-FRAGMENTATION CORRELATIONS OF PROTONATED ACTINOMYCINS;** *Thomas, Darren; Morris, Michael; Curtis, Jonathan; Boyd, Robert; National Research Council, 1411 Oxford Street, Halifax, NS B3H 3Z1, Canada.
- ThPG 274 **Characterization of Recombinant Forms of Adenylate Cyclase Toxin, CyaA;** *Hackett, Murray; Walker, Carthene B.; Shabanowitz, Jeffrey; Sebo, Peter; Guo, Lin; Hewlett, Erik L.; Hunt, Donald F.; Depts. of Chemistry and Medicine, Univ. of Virginia, Charlottesville; Pasteur Institute, Paris, France.
- ThPG 275 **Identification of Post-translational Modifications for Cytochrome P450lin;** *Huang, Rong; Ghosh, Dipak; Gunsalus, Irwin; Rinehart, Kenneth; School of Chemical Sciences, University of Illinois, Urbana, IL 61801.
- ThPG 276 **An ESI MS Study of the Soluble Methane Monooxygenase Enzyme System;** *Buzy, Armelle; Jennings, Keith; Amarbalita, Marvy; Wilkins, Pat; Dalton, Howard; Dept. of Chemistry, University of Warwick, Coventry CV4 7AL, UK; Dept. of Biological Sciences, University of Warwick, Coventry CV4 7AL, UK.
- ThPG 277 **ES-MS analysis of resorcinol suicide substrate binding to cyt c peroxidase;** *Doerge, Daniel R; Divi, Rao L; **Hutton, Therese; National Center For Toxicological Research, Jefferson AR, 72079-9502, USA.; Fisons Instruments VG Organic, Altrincham, WA14 5RZ, UK.
- ThPG 278 **Characterizing Peptides Isolated from Conus Venoms by Ionspray HPLC / MS & MS;** *Jones, Alun; Bingham, Jon-Paul; **Lewis, Richard J.; Alewood, Paul F.; University of Queensland, Queensland, Australia; Southern Fisheries Center, Queensland, Australia.
- ThPG 279 **ANALYSIS of CYTOMEGALOVIRUS (CMV) PROTEASE (MW 28 kDa);** *Siegel, Marshall; Tabei, Keiko; Berkenkamp, Stefan; **Hillenkamp, Franz; Bebernitz, Geraldine; Ding, Wiedong; Baum, Ellen; American Cyanamid.
- ThPG 280 **Effects of pH on the MALDI MS of Class I MHC Peptide Antigens;** *Woods, A.S.; Huang, A.Y.; Cotter, R.J.; Pardoll, D.; Jaffee, E.M.; The Johns Hopkins University School of Medicine.
- ThPG 281 **Analysis of MHC Class I Peptides by LSIMS Four-Sector / Array MS;** *Gallagher, Richard; Derrick, Peter; Butcher, Geoffrey; Powis, Simon; Department of Chemistry, University of Warwick, Coventry, CV4 7AL, UK.; Department of Immunology, The Babraham Institute, Cambridge, CB2 4AT, UK.
- ThPG 282 **Identification of Peptides Associated with Class II MHC Molecules;** *Addona, Theresa A.; Shabanowitz, Jeffrey; Hunt, Donald F.; University of Virginia, Charlottesville.
- ThPG 283 **Characterization of the Major Peptide Components in Subcellular Fractions;** *McCormack, Ashley L.; Eng, Jimmy K.; DeRoos, Paul C.; Rudensky, Alexander Y.; Yates, John R. III; University of Washington, Seattle.
- ThPG 284 **A Method of Analyzing Peptides with Continuous-Flow FAB;** *Whitehill, Andy; Vidavsky, Ilan; Gross, Michael; Washington University, St. Louis, MO USA.
- ThPG 285 **Identification of Influenza Epitopes and Insight into Antigen Processing;** *Gulden, Pamela H.; Shabanowitz, Jeffrey; Hunt, Donald F.; Tykodi, Scott; Wang, Wei; Skipper, Jonathon; Engelhard, Victor H.; University of Virginia, Charlottesville.
- ThPG 286 **Proteolytic Processing of Ovalbumin by the Murine Proteasome;** *King, Gina M.; Shabanowitz, Jeffrey; Hunt, Donald F.; Neidermann, Gabi; Eichmann, Klaus; University of Virginia, Charlottesville; Max Planck Institut Immunologie, Shiberreg.
- ThPG 287 **Identification of endo-HEL Peptide Fragments Presented by MHC Molecules;** *Vidavsky, Ilan; Whitehill, Andy B.; Gross, Michael L.; Nelson, Christopher A.; Viner, Nicholas J.; Unanue, Emil R.; Department of Chemistry, Washington University, St. Louis, MO 63130; Department of Pathology, Washington University, St. Louis, MO 63110.
- ThPG 288 **Analysis of Invertebrate Hemoglobin Chains by ESI-MS and ESI-MS-MS;** *Green, Brian N.; Kuchumov, Askar R.; Oliver, Ronald W. A.; **Vinogradov, Serge N.; Fisons Instruments VG Organic, Altrincham, Cheshire, WA14 5RZ, UK.; Dept. of Biochemistry, Wayne State University, Detroit, Michigan 48201, USA.
- ThPG 289 **Characterization of the hemoglobin of Cebus apella by ESI- and MALDI-MS;**

	*Shen, Tun-Li; Johnson, Robert B.; Buck, Steven; Goodman, Morris; Gage, Douglas A.; Dept. of Biochemistry, Michigan State University, East Lansing, MI 48824; School of Medicine, Wayne State University, Detroit, MI 48202.		
ThPG 290	Characterization of the hemoglobin from the backswimmer <i>Buenoa scimitra</i> ; *Kong, Zhengrong; Rinehart, Kenneth; **Vossbrinck, Charles; Huang, Rong; Sun, Furong; School of Chemical Sciences, University of Illinois, Urbana, IL 61801; Office of Agricultural Entomology, University of Illinois, Urbana, IL.		
ThPG 291	HEMOGLOBIN ANALYSIS BY ESI MASS SPECTROMETRY: QUADRUPOLE vs MAGNETIC SECTOR ; *White, Earl; Uhrig, Mary; Reed-Bombick, Betsy; Chu, Inhou; R.J. Reynolds Tobacco Company, BGTC, PO Box 1487, Winston-Salem, NC 27102.		
ThPG 292	Electrospray Tandem Mass Spectrometry of Normal and Abberant Haemoglobins. ; *Summerfield, Scott; Jennings, Keith; **Johnson, Andrew; University of Warwick, Department of Chemistry, Coventry, CV4 7AL, UK.; Institute of Child Health, 30, Guilford St., London WC1N 1EH, UK.		
ThPG 293	ISOLATION AND IDENTIFICATION OF HEMOGLOBIN GLOBULIN CHAINS BY HPLC / ESI-MS ; *Chu, Inhou; **White, Earl; Department of Chemistry, Wake Forest University, Winston-Salem, NC 27109; R.J. Reynolds Tobacco Company, BGTC Box 1487, Winston-Salem, NC 27102.		
ThPG 294	A Structural Assignment for a Stable Acetaldehyde-Lysine Adduct ; *Braun, Karen P.; **Cody, Robert B.; Jones, Dane R.; Peterson, Charles M.; Sansum Medical Research Foundation, 2219 Bath St., Santa Barbara, CA; JEOL USA, Inc., 11 Dearborn Road, Peabody, MA 01960.		
ThPG 295	Variant hemoglobin characterisation by ES-MS / MS of intact globin chains ; *Morris, Mike; Green, Brian N; Shackleton, Cedric H L; Witkowska, H Eva; Fisons Instruments VG Organic, Altrincham, Cheshire, WA14 5RZ, UK.		
ThPG 296	Protein Mapping of Human Plasma using Off-Line HPLC-MALDI / TOF-MS ; *Ingendoh, Arnd; Seta, Kazuo; Kanain, Michiko; Nakayama, Hiroshi; Uchida, Kazuhisa; **Isobe, Toshiaki; Okuyama, Tsuneo; Finnigan MAT Instruments Inc., Hatsudai, Shibuya-ku, Tokyo 151, Japan.; Tokyo Metropolitan University, Biochemistry, Tokyo 192-03, Japan.		
		FRIDAY ORALS	
		8:15 AM	PLENARY LECTURE: Mr. Miles O'Brien, CNN Science Correspondent
		9:05-9:30	Break
		Morning	Metal Ion Chemistry, organized by Jon Amster
		FOA 09:30	Cluster Assisted Sigma Bond Activation by Transition Metal Centers ; van Koppen, P.A.M.; Kemper, P.; Maitre, P.; Bushnell, J.; Perry, J.; *Bowers, M.T.; University of California at Santa Barbara.
		FOA 10:10	The Metal Ion Affinities of Biomolecules Determined by the Kinetic Method ; *Cerdeja, Blas; Wesdemiotis, Chrys; Department of Chemistry, The University of Akron, Akron OH 44325-3601.
		FOA 10:30	Metal Ion Assisted Derivatization of Buckminsterfullerene ; *Kan, Steven Z.; Byun, Yong G.; Lee, Sam A.; Freiser, Ben S.; Department of Chemistry, Purdue University, West Lafayette, IN 47907.
		FOA 10:50	Break
		FOA 11:10	Amino Acid and Peptide Reactions with Ground State Metal Ions by FTICR ; *Lei, Qing Paula; Amster, I. Jonathan; University of Georgia, Athens.
		FOA 11:30	MS & MS / MS OF COORDINATION BETWEEN ALKALI METALS AND NATIVE GANGLIOSIDES ; *Ngoka, Lambert; Costello, Catherine; Mass. Inst. of Technology, Cambridge, MA.
		FOA 11:50	Electron Affinity and Catalytic Activity of Fe(octethylporphyrin (NO₂)_n) ; *Jin, Lei; Ellis, P.E.; Lyons, L.E.; Ridge, D.P.; University of Delaware.
		FOA 12:10	Tandem Mass Spectrometric Study of C₅H₅FeR(+) Ions ; *Zagorevski, Dmitri; Holmes, John L.; Chemistry Department, University of Ottawa, Ottawa, Ontario, Canada.
		Morning	Hyphenated Chromatography / MS, organized by Tom Covey
		FOB 09:30	Rapid and Sensitive Sequencing of Proteins isolated by Gel Electrophoresis ; *Mann, Matthias; Wilm, Matthias; Shevchenko, Andrej; Houthaeve, Tony; European Molecular Biology Laboratory (EMBL).
		FOB 09:50	In Situ Chemical Modification, Digestion and Characterization of Proteins ; *Blackburn, R.K.; Mark, J.; **Kassel, D.B.;

- Glaxo Research Institute, Research Triangle Park, NC.
- FOB 10:10 **Identification of Peptides from Combinatorial Libraries with ACE-ESI-MS;** *Kirby, Daniel P.; Chu, Yen-Ho; Dunayevskiy, Yuriy; Karger, Barry L.; Vouros, Paul; Barnett Institute, Northeastern University, Boston, MA.
- FOB 10:30 **CZE-MS analysis of peptides and proteins using a sheathless interface;** *Kelly, John; Thibault, Pierre I-1; Ramaley, Louis I-2; National Research Council, 1411 Oxford Street, Halifax, NS, B3H3Z1, Canada.
- 10:50 **Break**
- FOB 11:10 **Novel Modifications and Clinical Applications of PC-CE-MS;** *Tomlinson, Andy J.; Braddock, W. David; Benson, Linda M.; Oda, Robert P.; Riggs, B. Lawrence; Katzmann, Jerry A.; Naylor, Stephen; Mayo Clinic, Rochester, MN.
- FOB 11:30 **LC / MS Using an Ion Trap / reflectron Time-of-flight Mass Spectrometer;** *Qian, Mark G.; Bai, Jian; Liu, Yuanhui; Zheng, Kefei; Luman, David M.; University of Michigan, Ann Arbor, MI.
- FOB 11:50 **Direct Coupling of TLC with MALDI mass spectrometry;** *Gusev, Arkady I.; Proctor, Andrew; Rabinovich, Yakov I.; Hercules, David M.; Department of Chemistry, University of Pittsburgh, Pittsburgh PA 15260.
- FOB 12:10 **Flow Injection Analysis - MS for In-Process Control of Drug Synthesis;** Colgan, S.T.; *Sharp, T.R.; Hammen, P.D.; Reed, R.H.; Horan, G.J.; Gwiazda, P.W.; Pfizer Central Research, Groton, CT.

Morning Good Laboratory Practices for Mass Spectrometry, organized by Kelvin Chan

- FOC 09:30 **GLP for Qualitative Mass Spectrometry from an Academic Perspective;** *Henion, Jack; Cornell University, Ithaca, NY 14850.
- FOC 09:50 **Providing Evidence of Structural Validity As Part Of GALP Compliance;** *Canales, Ph.D., Mark; Hall, Trevor; Shofstahl, James; Coyle, Robert; Finnigan Corp. San Jose, CA.
- FOC 10:10 **GOOD LABORATORY PRACTICE AND DATA MANAGEMENT;** *Musser, Steven M.; Sphon, James A.; Browning Jr., Martin; Woolen, Stan W.; U.S. Food and Drug Administration.
- 10:50 **Break**

- FOC 11:10 **Validation of an On-Line Archiving System for Quantitative Mass Spec Data;** *Coleman, Patricia M.; Oglesby, Thomas D.; White, Robert J.; Werdel, Lisa P.; Taylor Technology, Inc.
- FOC 11:30 **Validation of Mass Spectrometry Data Systems in a Regulatory Environment;** Palmer, Cynthia A.; *Alexander, Michael S.; Abolin, Craig R.; Sandoz Research Institute.
- FOC 11:50 **An Electronic Lab Notebook System for the VG 11 / 250J Data System;** Rosnack, K.J.; *Sharp, T.R.; Pfizer Central Research, Groton, Connecticut.

Morning Mass Spectrometry to Study Higher Order Structure, organized by David Smith

- FOD 09:30 **Probing Noncovalent Interactions by Ion Spray MS;** *Ganem, Bruce; Henion, Jack D.; Department of Chemistry, Cornell University, Ithaca, NY 14853-1301.
- FOD 10:10 **Characterization of Protein-DNA Complexes using ESI-MS;** Cheng, Xueheng; *Harms, Amy C.; Smith, Richard D.; Morin, Paul E.; Goudreau, Paul N.; Terwilliger, Thomas C.; Pacific Northwest Laboratory, Richland, WA 99352.
- FOD 10:30 **Studies of Non-Covalent Interactions by Time-of-Flight Mass Spectrometry;** *Chernushevich, I. V.; Ens, W.; Standing, K. G.; University of Manitoba, Winnipeg Manitoba Canada R3T 2N2.
- 10:50 **Break**
- FOD 11:10 **Localization of Secondary Structural Effects in Proteins;** *Anderegge, Robert J.; Wagner, David S.; Glaxo Research Institute.
- FOD 11:30 **Protein Conformational Changes Studied by Hydrogen Exchange and MS;** *Zhang, Zhongqi; Smith, David L.; University of Nebraska-Lincoln, Lincoln, Nebraska.
- FOD 11:50 **Mass Spectrometric Characterization of Non-covalent TT Ef-Tu / Ts Complexes;** *Glocker, Michael O.; Nock, Steffen; Sprinzl, Mathias; Przybylski, Michael; University Konstanz Faculty of Chemistry PO Box 5560M732 78434 Konstanz GER.
- FOD 12:10 **Mass Spectrometry as a Tool for Protein X-ray Crystallographic Analysis;** *Cohen, Steven L.; Xie, Xiaoling; Mirza, Urooj A.; Burley, Stephen K.; Chait, Brian T.; The Rockefeller University, New York City.

Morning **Surface-Induced Dissociation, organized by Vicki Wysocki**

- FOE 09:30 **In-line SID Modes: Characterization and Comparison with High-Energy CAD;** Durkin, David A.; *Schey, Kevin L.; Medical University of South Carolina.
- FOE 10:10 **Influence of Peptide Sequence, Size and Basicity on ESI / SID Spectra.;** *Jones, Jennifer; Dongre, Ashok; Nair, Hari; Somogyi, Arpad; Wysocki, Vicki; Virginia Commonwealth University Richmond, VA.
- FOE 10:30 **Impulsive Excitation of Ions during Surface-Induced Dissociation;** *Burroughs, John A.; Wainhaus, Samuel B.; Hanley, Luke; Department of Chemistry, University of Illinois at Chicago.
- 10:50 **Break**
- FOE 11:10 **Ion / Surface Reactions: Towards a Better Understanding of Mechanisms;** *Cooks, R. Graham; Rohrs, Henry; Miller, Scott; Feng, Bingbing; Jiang,

Xudong; Pradeep, Thallapil; Patrick, Jeffrey; Ast, Teodor; Department of Chemistry, Purdue University, West Lafayette, IN 47907-1393.

- FOE 11:30 **Construction of a TQMS for the Study of Ion Surface Interactions Occurring;** *Hayward, Mark J.; Park, Frederick D.S.; Manzella, Lynn M.; **Bernasek, Steven L.; Princeton University, Princeton, NJ; American Cyanamid Company, Princeton, NJ.

- FOE 11:50 **A Surface Sensitive Super TOF-SIMS Technique Using Very Highly Charged Ions;** Briere, Michael A.; *Schenkel, Thomas; von Wittenau, Alexis Schach; Schneider, Dieter H.; Lawrence Livermore National Laboratory, Livermore, CA.

- FOE 12:10 **Ion Neutralization for Surface-Induced Dissociation at Ni(111) and NiO(111);** *Wainhaus, Samuel B.; Burroughs, John A.; Hanley, Luke; Department of Chemistry, University of Illinois at Chicago.